





## Original Correspondence.

## THE COAL QUESTION.

SIR,—In the *Mining Journal* of last week I observe an article from a correspondent, entitled "The Coal Question." As the article discusses certain figures given in my volume called the "Coal Question," some of your readers may suppose that it is my assertions which are contested. I shall take it as a great favour if you will allow me to explain that the article does not appear to have been written by a gentleman who had read my work, nor to bear against my conclusions.

For instance, I have not held to the opinion of Mr. Hull, that the internal heat of the earth will prevent us sinking below 4000 feet. I have the highest respect for Mr. Hull's work, but I found, as I believe, that his calculations on this point were invalidated by an oversight. I merely think that at the depth of 4000 or 5000 feet very considerable and costly ventilation will be requisite. ("Coal Question," p. 43.)

Again, though I calculated that if our consumption continued to increase at its present rate it would amount to 2607 million tons per annum about the year 1961, this was only for the purpose of showing how absurd the supposition was (p. 215). It is the consequences of the opposite supposition—that our consumption cannot long increase as it has been accustomed to, whereas the consumption in other countries will undoubtedly increase very rapidly, that I have endeavoured to point out.

The remainder of your correspondent's calculations seem to have equally little reference to anything I may have said. For, on page 151, I wrote—"We cannot, indeed, always be doubling the length of our railways, the magnitude of our ships, and bridges, and factories. In every kind of enterprise we shall, no doubt, meet a natural limit of convenience or commercial practicability. . . . But the new applications of coal are of an unlimited character." Every year coal, and iron, and steam-power are applied to new purposes, here and abroad; and it is thus that a very large increase of consumption must occur; but no one would suppose that every item of coal consumption must increase in an equal ratio.

Owen's College, Manchester, May 16. W. STANLEY JEVONS.

## EXHAUSTION OF OUR COAL.

SIR,—The subject of the exhaustion of our coal seems to be occupying some attention at present, consequently many speculations and some calculations are put forth through the medium of the press. Amongst the number is one from Mr. A. Bassett, of Cardiff, an authority on the subject. I can fully endorse Mr. Bassett's statement as to the loss of coal in working. Many places in different parts of the country could I point to where 25, 30, and even 36 per cent. of the coal is actually lost, or rather valueless. Mr. Bassett suggests the desirability of a "Government Commission of Enquiry," and the offering of a "premium for the best method of converting small coal into a marketable commodity." While we should all be glad to see some or any profitable method of converting small coal into a marketable commodity, yet is not the most simple and rational method that of trying to keep the coal a marketable commodity? We all know that the coal does not exist in that unmarketable condition as an integral part or necessary, though separate, accompaniment of our workable seams of coal. As a rule, our workable and worked coal is in a state of entirety, or in solid beds, exactly like the layers of rock in our stone quarries; consequently, it strikes me the best method to get the whole of our coal into the market is to produce it in such a manner as not to make any portion of it unmarketable; for if the non-marketable portion does not exist prior to our working the coal, then I maintain we make the 25 or 30 per cent. unmarketable; and if we make it so, and then have to devise some method to make those small particles adhere to each other again, we necessarily have two makes, or the method to make the coal small and a method to artificially make it large again. There are methods of working coal whereby the production of small coal is reduced to a minimum; in some coals the cost per ton would be some 10 or 15 per cent. more, but if the balance were 15 or 20 per cent. on the credit side, besides economising the country's wealth, why not adopt it?—*Normanton, May 14.* J. WARBURTON.

## COAL WORKING IN DURHAM AND SOUTH WALES.

SIR,—The value of the communication of "M. E." in last week's *Journal* is greater than many upon first reading it would be willing to admit, the practice being too frequent to advocate either the North of England or the South Wales system, and oppose the other at all hazards. The importance of all coal, large and small, being brought to surface can hardly be overestimated, since it would "run its time," it would be a very different thing if the same small coal were in a far end of a deep colliery. "M. E." tells us in the county of Durham the almost invariable practice is to send every particle of coal out of the mine without riddling, and if this be done it will go a long way to compensate for any supposed want of economy in the system. The Yorkshire plan, it appears, is something like the long wall system, but far less complete, and, so far as I can understand, has all the complications of the pillar and stall system, without its advantages. It seems to me that whether the Durham, the Yorkshire, or the Lancashire systems be adopted, there must be a considerable quantity of coal left behind and hopelessly wasted, because a certain proportion of the pillars, or their equivalents, must be left unwrought; but if the long wall, in its integrity, be used the coal may be removed as completely as the brickmaker removes a deposit of brick earth.

With regard to the relative safety of the system which provides a special man to set timber and props, and that which leaves each man to set for himself, I am certainly inclined to give preference to the latter; but before that can be generally done the character of the miners must be raised, so that it shall be equal to that of the South Yorkshiremen, who are in that respect superior to most of their fellow-workmen. It is true that strikes are not less frequent in South Yorkshire than in other districts, but the effect upon the men is very different, for whilst in other parts a strike places the men in a position of extreme poverty, the Yorkshireman has his freehold cottage, and a garden sufficient to supply him with the necessities, though not the luxuries, of life to which he has been accustomed. Now, it will readily be understood that a man who is prudent enough to render himself thus independent will very naturally be more careful in the pit than he who is but one remove from the brute creation; so that it is scarcely fair to compare the relative casualties in the two districts, even if the same systems of working were in use.

But, although I am disinclined to accept the comparison as proving either the relative merits of the long wall and pillar and stall workings, or the relative safety of special timber setters, I think that the statements both of Mr. George Brown and "M. E." prove that the work should be placed in the hands of intelligent men, and gives much additional weight to the arguments of the men that a larger number of colliery officers should be, by compulsion, educated working men.

Barnsley, May 16.

AMALGAMATION BY THE ADMIXTURE OF METALS  
HAVING AFFINITY FOR OXYGEN—No. II.

SIR,—Before proceeding to describe the old woven onyx (asbestos) documents discovered by me in my voyage to New Guinea and Borneo, I will notice a few passages from the grand manuscript work of Roger Bacon (Bacon), "Ars Omnia," in which he and his pupils seem to have amassed some considerable quantity of matter, and in translating the Arabic works of Lebr (chemical) and the Persian Eos (or Eos), a work describing the laws of things existing in air, also in water, and also in the earth, we are enabled to snatch at a few stray historical facts worthy of notice, which appear to suggest the origin of the science of alchemy:—"And there came from the land of Jap, a long way over the big water, a man called Syni, whose skill in the art of metals and rare things was so great, that he made metals that no man knew from rock and earth which lay in great abundance in many places; but this man Syni, finding how great the admiration for gold was in all the land, forthwith set to work to make that which was prized so greatly by all men; and after many labours, and the most subtle combination of uncommon matters, he took from his earthy medley real gold, which he declared to be the work of his own will, and that he transmuted the common metals into the great, but all men saw the small piece of gold to the vast labour, and held him low in estimation, until at last they sought him to kill him, as one of weak magic and power; but Syni, judging their intentions, fled that place, and going up into the land of the great king, he made new fire vases and stoves, and brought forth wonders of extreme variety; and, having gathered together many slaves, he was said to be hewn from the mountain his effigy, 400 (?) high, which,

when all men saw, they came from far lands, and cut from their ornaments many pieces of gold to lay at his feet."

The "Ars Omnia" is a vellum manuscript, subdivided into 130 books, and is neatly written in double columns, by seven or eight different scribes, and, with the exception of a few extracts, all in pure Latin. The first 43 books are upon the history of the earth, in which the Eos is frequently quoted; the next seven are made up from translations of the works of Hermes, Trismegistus, and Arctius; then a book on the great Persian King Kalid (a great chemist), and three books of translations of his works; then 16 books on Geber, the Arabian king and chemist, and then follows a book on "The Metal of Salt," in which he describes how "the burning matter of the salt has greater affinity for other substances still more foreign with which it will combine, leaving the metal of salt pure." Also at another page he says that "the transmutation of salt is effected by much craft and cunning, leaving a good metal the result, which is like no other metal, but the art is not known to common men." And in the next book, entitled "The Magic of Salt," he says—"It is well that the vulgar understand not the good and great art of (de)composing the destruction of salt, as if it were known to all, riches would be no longer held rare, or even respected, as with this metal much gold can be obtained, and such great virtue doth it contain, that one piece of such size that will cover the top of the small finger will work wondrous magic throughout a great mass of such worthless stuff that no man would buy for the smallest coin, yet, when this and other metals, well known to all men, shall lovingly and speedily unite in one common mass, then the adored of all metals becomes life, and is born unto man, and true and real gold may be taken from those common metals, without loss to them in weight or virtue, so that by great craft, cunning, and magic, not enjoyed by common men, good gold, never again to be lost, is transmuted from the vilest of dross; and so men may enjoy riches without prying into other money bags, or borrowing from those who have little to lend." The next five books are upon digging into the earth for the calx of metal, and the remainder upon the art of extracting and purifying metals and earths. I have chiefly selected these passages to prove that the alchemists, in spite of all their humbug and mistaken notions, often cheated themselves; and when they fancied they were making or transmuting gold, they were simply extracting it from ores or metals which absolutely contained it.

Okehampton, May 11.

JOHN CALVERT, C.E.

## BANKING, FINANCE, AND MINING—No. I.

SIR,—The progress made in the growth of business by the several metropolitan joint-stock banks—the London and Westminster, London Joint-Stock, Union of London, and the London and County—indicated most unquestionable success, yet the prosperity of these concerns was shadowed by the failures of the Royal British and the Commercial Banks. The former is of world-wide notoriety for its mismanagement, and gross deviation from established and recognised banking principles; it must be within the recollection of all practical men that the mal-conduct of the executive recoiled upon itself, and they had to sustain the ignominy of legal and public exposure, whilst the sentence of a jury condemned them to a long and protracted imprisonment. The collapse of this establishment arose almost entirely from becoming "pawbrokers" instead of "bankers." The Commercial failed from causes too patent to require comment, otherwise than to observe that their business was absorbed by the London and Westminster Bank, whilst the constituency of the Commercial were shamefully sacrificed. The City Bank and the Bank of London, with other minor establishments, would have made far greater progress had they not had to encounter the competition of a host of newly-created concoctions, constituted under the Limited Liability Act. Still, before we refer to these, allow us to observe that the shareholders of the London and Westminster, and the other banks named, are each singly, as well as collectively, responsible for the whole debts of the several companies. It is true that the London and Westminster shares are 100l. each, with 20l. paid up, and the proprietary, as betwixt its members, can only be called upon to pay 80l. per share, in addition to the 20l. per share already subscribed, yet in case of disaster, and default of all its members responding to calls, the remaining shareholders have to contribute even to the last shilling they possess any deficiency that may arise, and even until the whole debts and outstanding obligations are liquidated in full. Now, pray let us ask the question, how far this differs from ordinary co-partnerships and absolute responsibility, notwithstanding the shares are nominally of 100l. each? Why the question, although too generally misunderstood, and probably by no portion of the investing public so much as by a full moiety of the shareholders themselves, yet it is easily answered. In the London and Westminster partnerships for trading purposes, are each positive and unbounded, yet in respect to ordinary trading partnership a member can retire, and is absolved from future responsibility upon advertising in the *London Gazette* simply the fact of "dissolution." Not so, however, in the case of the banks referred to, for the shareholders continue liable even for three years after transfer of shares, not only for debts then existing, but also for those that may be contracted over the period named.

This is, in fact, absolute partnership in its fullest extent, and, probably, it is attributable to this position that the growth of business has extended to its present colossal form, and that the security afforded from an extended and numerous share list protects the institutions from any fear of a sudden drain, through panic and mistrust, as is now instanced in respect of Baring's Banking Company, Overend, Gurney, and Co., and other recently-defunct companies, established upon a limited responsibility. With these remarks upon banking and finance companies, we beg to draw attention to the neglected position of British mining, which forms, next to agriculture, the largest contributor to our national wealth, and affords employment to vast masses of the working community. The surface of the earth yields food for man and beast, as well as timber and other products, constituting the first and most valuable elements in social life; whilst the bowels of the earth yield us coal, iron, copper, tin, lead, and numerous other metals, that rank in national importance, wealth, and necessity second only to agriculture itself. The annual value is returned at 40,000,000l. to 42,000,000l. sterling. Without our minerals, ships could not be constructed, or railways made, nor locomotion effected. In truth, the metallic product of this country is as requisite to the prosperity of the nation as the sustenance which the earth yields to its population. We need not mention to those that are acquainted with the vast mineral resources of this Kingdom, that the coal fields are very widely extended, being found in rich and widely-spread basins in most of the counties of England, Ireland, and Scotland. Cornwall and Devon, however, stand pre-eminent for the yield of copper and tin; but Nature, so bountiful in these with lead and other metals, has denied this favoured district the production of coal; hence arises the necessity of conveying the copper ores to Wales for smelting, the coal required being threefold in weight compared with the ores.

The high prices of money, now 10 per cent. minimum at the Bank of England, and 12½ to 15 per cent. on Bank paper charged in the general market, added to the high value of money for a long period past, have exercised a depressing influence on the prices of all metals. The mines in Cornwall producing copper and tin are almost entirely subject to the smelter's appreciation of gains to himself, irrespectively of the requirements of the miner's industry to raise the ores from whence his profits accrue. In truth, the smelters are bankers; and as the miner would have to apply to the banker for support, if he refuses the price offered for his ores he must naturally succumb to any extortion in price that may be exacted. We, however, ought not, in common honesty, expect the smelter to apply his money to hoard the produce of tin and copper, when, in fact, he can obtain 12½ to 15 per cent. from employing his capital as a banker. This, in a great measure, accounts for the existing prices of metals, and so soon as the money market becomes easier, so sure will the current value of metals advance.

Until the introduction of the Limited Liability Act, and thereupon the host of ephemeral creations for banking, discount, finance, and building purposes, British mining possessed peculiar fascination in the eyes of the enterprising public. Yet for the past two years mining pursuits have been wholly neglected, and shares in *bona fide*, sound, prosperous, and prospectively valuable companies can in many instances be purchased at prices varying below the value of machinery at surface and underground, still less of a title of the computed value of minerals discovered and known to exist. The Cost-book System is an absolute partnership, but, unlike banking, a shareholder can retire at any moment by addressing a simple notice of relinquishment to the pursuer, from which date his liability ceases. The retiring partner can further claim to be paid his proportion of the assets in hand, value of ores broken, of plant at surface and underground, together with all materials and properties belonging to the company. These are salient points, and compare favourably with railways, unlimited or limited bank and finance companies, or house-building, shipping, and

most other mediums for employment of capital open to the investing public for selection. It is truly astonishing to reflect upon the lamentable position of such valuable properties as the following:—Clifford, with more than 100,000l. worth of mineral discovered, sells for about 15,000l. to 20,000l. North Roskear, that has already paid 104,000l. in profits, and has a field of machinery that must have cost above 30,000l., commands a nominal value of 1400l., or say 2l. per share. St. Ives Consols, Par Consols, St. Day United, Buller, South Frances, Carn Brea, and other large producing mines, are selling at nominal prices, and mostly below value of plant.

The suspension of the several "limited" companies of late has caused great irregularities and much inconvenience to both brokers and their clients in completing open transactions in shares. The custom on the Stock Exchange is to deal for settlement on the account days (twice a month). The law of the case appears to render the completion of all these operations negative. That as the share registry is closed, no transfer can be entered therein; thence neither buyer or seller can complete, and hence all dealings unfinished collapse. This is as it ought to be, for as the vendors would in case of payment hand over valueless shares (undetermined before suspension), it is only fair that the purchasers should be, upon similar principles of equity, released from loss, as no possible opportunity for gains could have accrued to them. The Stock Exchange members are governed by rules and regulations, which are enforced with equal justice against all its members, consequently their decision upon the character of any public scheme is regarded by the world with the gravest interest; but it is absurd to recognise the spirit of gambling exercised by a majority of its members in respect to such institutions as Overend, Gurney, and Co., the Alliance Bank, the Credit Foncier and Mobilier of England, and a host of other largely extended and important commercial undertakings. Their practices are patent to all practically conversant with market operations. In the first instance, they "rig" shares in new projects to fabulous premiums before either their worth is ascertained, or even their existence as a corporate body established, by the time they assume a fair working position all the shares are purchased by the public, when a system commences of depressing the market price through "bearing" shares, and thus creating a panic, when the credulous and timid force immediate realisation, thus assisting the game in hand; and if the promoters or chief holders do not absorb the supply the object of the "bears" is effected, the price drops, and the double operation succeeds—securing first the premium and secondly the profits, through selling for time delivery, and subsequently repurchasing at depreciated prices to complete. This pernicious conduct has likewise prostrated the mining share market until it is weeded of many questionable undertakings that were upon the *tapis* three years ago, and probably within our knowledge, extending over thirty years, no epoch in the history of mining enterprise presents so favourable an opportunity for profitable employment of capital as the present. In no branch of our native industry have we such brilliant instances of success as can be enumerated in mining. Where can you instance a Devon Great Consols, a Dolcoath, a Cook's Kitchen, a Carn Brea, a Tincroft, or such a range of prosperous yield as extends from Great Wheal Busy to Harmony, the Tolguses, Croftys, North Pool, North Roskear, on to the Setons? These, Mr. Editor, are examples unsurpassed in any other commercial pursuit, whilst experience attests that the growth of mineral far exceeds its extraction. Such not only enrich all associated therewith, but give encouragement and renewed hope to the unfortunate in other companies. Patience and perseverance are essential to success in mining adventure. All cannot obtain prizes at starting, yet, with judicious economy, practical management, and the exercise of ordinary precaution in the selection of *bona fide* companies, no investment pays so well, often yielding vast profits upon a comparatively small outlay.—*Lombard-street, May 18.* R. TREDINNICK.

## THE HORRABRIDGE CATASTROPHE.

SIR,—In consequence of the dreadful calamity causing the death of eight miners, at Furze Hill Wood Mine, near Horrbridge, by tapping the water from the Old Furze Hill Mine adjoining, it will not be out of place to remark that a short time since meetings were held at Plymouth by the mine proprietors and agents, with a view of providing funds for the miners and their families in cases of sickness, accident, and death. Unfortunately, however, for the survivors of these poor miners, the formation of this society (termed the Miners' Association for Devon and Cornwall) is not perfected, which will prevent any benefit being derived from this source in the present distressing case. I have observed in many similar cases that have occurred in the collection of funds from various causes that appeals have been made to the sympathy of the public, which have been very handsomely responded to; and I venture to suggest, Mr. Editor, that a similar appeal be made to the public in the present case, for the purpose of raising such a sum of money as will, to some extent, soothe the sorrow of the heart-broken widows, and assist in educating the fatherless children, and prevent their being paupers in our Union.

I beg further to suggest that committees be formed in various towns in connection with the committee of the Miners' Association for Devon and Cornwall, when I hope a very generous response will be made towards this very desirable object.

Abbey Mead, Tavistock, May 17.

THOMAS NICHOLLS.

## ROCK BORING MACHINERY.

SIR,—A correspondent, in last week's *Journal*, states that he has invented a hand-boring machine. Without it has some special merit, both in cheapness of first cost and simplicity of action, it is doubtful if it can become of any commercial value. It is impossible to gain an increment of power by simply transferring it from the ordinary mallet to a hand-worked apparatus. The most which can be accomplished is that a machine of this character may relieve the miner from some of the fatigue attendant upon boring in confined and disadvantageous positions. One of the German hand-boring contrivances consists of a ratchet brace fitted with a steel cutter, pointed the same as an ordinary tondry tool. This tool is rotated and advanced by means of a screw actuated by a ratchet wheel and handle. In fact, disregarding its covering of leather, it is no other than the common ratchet brace applied to stone boring. This tool will succeed well enough in drilling gypsum or other equally soft rock, but what is required is an apparatus that will bore the hardest stone, and do it without let or hindrance, at a rate much in excess of what can be effected by hand labour. Intending inventors may spare themselves much useless thought by first ascertaining what others have done in this direction, and they will do well to study the machines of Schumann, Schwarzkopf, Sommelier, Abegg, Lowe, Crease, and others.

May 15.

## THE WALLACHIAN PETROLEUM COMPANY (LIMITED).

SIR,—The letter which appears in the *Mining Journal* of May 12, informing "the public that Mr. Paul was dismissed from this company's service on March 27, 1866, and that the statement of this fact will somewhat account for the very great zeal and interest which Mr. Paul has manifested in regard to the affairs of this company," conveys an imputation which I cannot allow to pass, without stating that I have no desire to intrude upon "the public" a discussion of the affairs of this company, or of the matters in dispute between the directors and myself, which will be dealt with in a more appropriate manner. My reason for addressing to you the letter which appeared in the *Journal* of May 5, was simply to avoid being regarded as the origin of the belief which the directors profess in regard to the future of the company's affairs, and to prevent the possibility of being implicated in the announcement that the company "are in receipt of a revenue equal to 30,000l. per annum," which appeared in the *Journal* of April 14, as coming from the manager in Wallachia. The necessity for doing so will be obvious to anyone acquainted with the affairs of the company, and if the directors felt that my letter required to be noticed by them, it might have been expected that their reply would have been more relevant to the subject of my letter than the ineffectual statement which they have deemed convenient to make to "the public" in reference to which I have nothing to say here.

8, Gray's Inn-square, May 14.

B. H. PAUL.

## PROSPECTS IN THE CHIVERTON DISTRICT.

SIR,—Notwithstanding the great monetary panic, amounting to unprecedented disaster in the commercial world, it is satisfactory to know that in *bona fide* mining companies there is no "stopping payment," but, on the contrary, they continue to give their usual dividends. A meeting of the shareholders in West Chiverton is to be held to-morrow (Thursday), at which an increased dividend will, in all probability, be declared. This mine is paying about 12 per cent. on the present price of shares, and to the original holders something like 120 per cent. per annum, showing that there is no property, when carried out in its integrity, so safe, and certainly but few better paying ones. To



Mr. SIDNEY A. SMITH seconded the motion. In doing so he said the principle of receiving large amounts of deposits was a disadvantage to banking concerns, be-







**LONDON GENERAL OMNIBUS COMPANY.**—The traffic receipts for the week ending May 13 was 12,311*l.* 7*s.* 7*d.*

**LUSITANIAN.**—**Pall Mill, May 8:** Taylor's shaft is worth 1 ton per fathom for the length of the shaft; the men are now cutting a pit in the 100, where the ground is rather hard; we have to sink about three weeks. Her shaft is worth 1½ ton per fathom. Oak shaft is down to 60 and the men began to cut a shaft. The ground is rather favourable, and has the great canner lode in it, 1½ ft. wide, composed of the country and spots of lead. The 100, east of Taylor's, is composed of quartz, with a branch of ore worth ½ ton per fathom. The 100 west is composed of quartz. The 20 west is composed of dry flookan. The lode in the 80 east is worth 1½ ton per fathom. The 80, east of Slide lode, is composed of flookan, quartz, and ore, worth for the latter ¾ ton per fathom. The 28, east of Slide lode, is composed of quartz and stones of lead. The ground in the 50 cross-cut has much improved, having passed through several branches, but none of value. In the 20 cross-cut south we have driven through a fathom about 3 in. wide, very regular, and underlying towards the north about 8 inches of fathom, composed of quartz and flookan.—**Stops:** The stops above the adit, west of Perez' shaft, are worth ½ ton per fathom. The stops above the 18, east and west of Perez' shaft, are worth ½ ton per fathom. The stops above the 60, west of Joaquin's winze,

**HOLLOWAY'S PILLS—MEDICINE FOR THE SPRING.**—Diseases latent in the human system, which the winter will manifest themselves in, the approach of warmer weather, unless the blood be freed from impurities, and the body generally from noxious matters. Holloway's pills have long since established the highest reputation for the small and efficient manner in which they accomplish this purifying purpose. These excellent pills search every organ, pervade every tissue, and successfully grapple with all deleterious substances, either by neutralising them or extruding them. Holloway's pills are a safe, pleasant, and powerful medicine, and of the most reliable strength. A medicine so safe, certain, and universally useful is an acquisition which every householder should have in his possession; by its means he will unconsciously prevent trifling disorders becoming serious diseases.



## Mining Correspondence.

## BRITISH MINES.

**ABRAHAM CONSOLS.**—J. Vivian, May 17: We have commenced operations on the building of our pumping-engine house and steam stamps, &c. Our office and store-houses are nearly complete. We have an excellent quarry of building stone for walling purposes, and near the house that the stone will be put from the quarry on to the building without the aid of carriage by carting, wheeled from the quarry on to the scaffolding. Our operations on the mines progress very satisfactorily. We shall commence bringing the engine on the mines next week, and hope to get it working in about ten weeks from this date.

**BEDOL-ACR.**—May 16: There is no alteration in Crofts' shaft. The end driving in the 77 yard level north-east is still producing some nice stones of ore, but not enough to sell.

**BOTTLE HILL.**—J. Eddy, May 17: The lode in the 17, west of the western shaft, is now full 10 ft. wide, and the whole of the lode saving work for tin; the lode in this direction is improving both in size and quality. The lode in the stopes about 15 fms. east of this end, in back of the same level, is about 7 ft. wide, and producing tin, but the produce is low. The lode in the stopes in the 34, east of Williams' shaft, is about the same as when reported last week.—South, or Copper Lode: The lode in the 12, west of shaft, is still small, but the ground is rather easier for driving. We shall commence burning for our next sampling the early part of the coming week.

**BRYN GWIG.**—S. Harper, May 16: In the 102 fm. level, east of engine-shaft, we are still opening towards the north, in order to ascertain the main part of the lode. The rise in the back of this level is communicated with the winze from the 90 fm. level, thereby giving this part of the mine good ventilation, also giving us a better advantage for working our pitches. The lode in the 40 fm. level, west of engine-shaft, is about 3 ft. wide, with 1 ton per fathom; from the appearance of this end some few days since, I fully expected to see a good course of lead in it, but up to the present I am rather disappointed; still I have great confidence that we shall meet with it ere long. The lode in the 90 east has fallen off since last report, now worth 1 ton per fm.; the ground is hard for progress. The 75 fathom level east, driving on the shale, is without change for some time past. The same level, driving west from engine-shaft, I am glad to say, is looking very promising, worth 2 tons per fathom, and promises further improvement; this speaks well for the west part of our mine. We have this day commenced with the sinking of Brownwell's shaft from the 40 fm. level, on the course of the lode; I hope to make good progress with the sinking of this shaft, as it is very desirable that this should be carried on with all possible speed, for the benefit of the west part of the mine. All our pitches about the 90 fm. level continue to yield their usual quantities of lead. Edwards' pitch, in the back of the 75 fm. level, on the north and south lode, looks well, and worth 3 tons per fathom. Brooks' pitch, in the back of the 65, on the west run, is again looking better, now worth from 5 to 6 tons per fathom, but I am sorry to say the men cannot do proper labour for want of air. I shall commence a cross-cut north from No. 5 winze, in order to properly ventilate this part of the workings. We sold last Thursday 45 tons of lead ore, at 14l. 3s. 6d. per ton. We are getting on as fast as possible with the laying down of our tramroads, &c., on the floors, and hope, if all well, to complete them in about a week or a fortnight's time; after completion it will tell its own tale on the dressing cost, &c. All other parts of the mine are going on much the same as usual.

**BRYN GWYN.**—H. Nottingham, May 15: The level driving south-west from the middle of the incline, east of the shaft, is progressing, but slowly, the joint being very close, and consequently it is yielding but very little lead. The same joint going north towards the old workings is rather close; this end is yielding as much lead as can be expected from the quantity of soft ground in the joint. The cross-cut driving west from the lower level, south-west of incline, is in easier ground for driving, but unproductive for lead. I intend shortly to suspend the cross-cut, and put the men to make some trial on the joint we have crossed, which (by referring to the plan) you will see is the same from which we have had some good lumps of ore at intervals for the whole distance driven on it. The level driving north-west, on the north side of the incline, is rather easier for driving, and yielding small lumps of ore, but not of value. Clark's level, driving north, is yielding about the same on an average, but more irregular in yield; this end is now under the fall of the old level, and the lode in this level is 20 fms. west of the 135 end. We have now commenced sinking a winze to communicate the two levels, which will lay open a large amount of ore ground for stopping. We are about to cross-cut at the 160 to see if the same lode is standing to the north.

**CAPE CORNWALL.**—R. P. Goldworthy, May 16: The lode in the 100 end east is fully 6 ft. wide, the south part of which (4 ft.) is producing saving work. The 100 fm. level stopes are without change. The lode in the 90 end east is large and very promising; ground soft—a fine looking lode to reach the granite with, and in that strata it will no doubt become far more productive. The 90 fathom level stopes are producing saving work. The lode in the 90 end west is large and very promising. The stopes in the 90 end are producing fair quality stamping work. The lode in the 70 end west is letting out water freely; the composition of the lode is good, and the channel of ground is soft and highly mineralized; this is unquestionably a point of very great interest; we are expecting a rich deposit of copper ore. Our 30-in. engine is now pumping and drawing the tin dust and attle. We are stamping with 32 heads, which are attached to the 26-in. engine. Both engines are working well.

**CARDIGAN CONSOLS.**—S. Bennett, May 15: The only change to notice in the 80 end is the ground being slightly easier for driving, but very little lead has been taken down during the week, consequently it remains just as last reported. In the 80 end west we have taken down 8 to 9 feet of lode, and did an improvement in its value; it varies in width from 1½ to 2 ft., and is worth about 15l. per fathom. This looks well for the future prospects of the mine. We are making good progress in the 54 fm. level cross-cut south.

**CARDIGAN CONSOLS.**—H. Boundy, May 14: Copper Shaft: The lode in the 20 end is about 2 ft. wide, composed of spar, mende, and yielding some good stones of lead ore of a very promising character, set to drive by four men, at 8l. per fm. Boundary Adit: The lode in this level is composed of mende, spar, kila, and strings of copper ore; set to drive by four men, at 6l. per fathom. —Eagairith: The lode in the adit east is very porous, but subject to sudden changes, yielding occasionally excellent lumps of copper ore; set to drive by four men, at 6l. per fathom. The lode in the engine-shaft, sinking below this level, is 4 ft. wide, and yielding some good stones of copper ore; set to drive by four men, at 13l. per fathom. Four men will be employed in cross-cutting and opening on the lode in places which has hitherto been left undone. The machinery, &c., is all in good working order.

**CASTELL CARN DOCHAN (Gold).**—J. Parry, May 16: From underground, I have no particular change to notice, except that the lode in No. 3 stopes improves, as anticipated in a former report. Few specks of visible gold were seen in the stuff from it this morning. Owing to the breakage of a small shaft, we have had a little delay in the stamping this week, but everything will be right again by to-morrow. At the same time the water is rather light to drive the which. Gold obtained to-day from the central millers, 8 ozs. 2 dwts.; stamp stamped this month up to this morning, 94 tons.

**CENTRAL MINERA.**—T. Huges, May 17: Victoria Engine-shaft: The lode in the 60 yard level produces good stones of lead, and is very promising for an improvement. The lode in the rise is large, and producing very good lead, with every prospect of a continuance. We have commenced dressing, and are making satisfactory progress.

**CHIVERTON.**—Capt. Juleff and Bennett, May 17: They have set three pitches; two in back of the 70, east of Murray's, working at 7l. and 6l. per ton each, and one in back of the 80, west of Murray's, at 6l. per ton. They expect it will take about two months more to complete Murray's shaft to the 100. Looking at the opening out of the new ground, and with the quantity of lead now at surface raised from it, they recommend the making of the floors and the erection of a crusher forthwith. These, when completed, will enable them to make regular returns.

**CHIVERTON MOOR.**—Capt. Juleff and Bennett, May 17: In the 50 cross-cut, from flat-rod shaft, there is a splendid channel of ground, with occasional branches of lead, and very similar to what is seen north of the lodes at West Chiverton—they expect to meet with a good lode when intersected. They have about ¼ fms. to drive. They hope the drive will be finished by next account, after which they will make regular returns of lead.

**CLARA UNITED.**—J. Davis, May 16: Llywernog: Our prospects in the 50 are very encouraging; the lode is composed of spar, mende, and lead, and producing of the latter 1½ ton per fm., but less of blende than usual. The stopes in the back of this level continue to yield 8 dwts. of lead per fm. In the 40 the lode is regular, and worth 12 dwts. of lead per fm. The junction of the two branches which we have been lately expecting here has not yet been reached; the south branch must have deviated from its bearing in the cross-cut, and is now continuing to drive by the bottom of the water shaft, and in the meantime we are doing all we can to take up the pitwork as the water sinks.

**CLOWANCE WOOD.**—E. Chagwin, May 16: The engine-shaft is now down 5 fms. 4 ft. below the 30, and we are preparing to put in bearers and cistern, and to fix a 12-in. lift from the 20 to the adit level.

**CROWAN AND WENDRON.**—R. Reynolds, May 15: The lode in the engine-shaft is from 3 to 4 ft. wide, composed of quartz, peach, and prlan, impregnated with grey and yellow copper ore. The winze and rise will be holed in a few days, when we shall at once resume driving the 49-fm. level east.

**CUDDRA.**—F. Packer, A. Candy, May 16: Walker's shaft is sunk to the 120. We have to sink 8 ft. more for trip-plank and fork, which we hope to complete by the end of this month. In the 117, driving west on the south lode, the tin part is still 10 ft. wide, and yields 1 ton of black tin per fathom for that width; in the same level also west we are cutting out the north or newly-discovered lode; we have cut into it 5 ft. without any appearance of the north wall; this lode is likely to be very large, is one of great promise, and is producing as far as seen from 4 to 5 dwts. of tin to the 100 sacks; in this level further east we are continuing No. 1 cross-cut north to ascertain if there is any more lode. In No. 1 stopes, in bottom of the 105, the lode is 7 ft. wide, worth 35l. per fathom. In No. 2 stopes, west of winze, the lode is 9 ft. wide, worth 20l. per fathom for that width. All other parts of the mine are the same as last reported.

**DALE.**—R. Nines, May 14: No. 5 stopes are improved. The other stopes are without alteration. There is no change to notice in the winze. The vein in the old mine continues to yield some good ore, and looks very promising.

**DARREN.**—R. Williams, May 15: The sinking of the shaft is progressing; the arrangements we have made with the lift have reduced the water materially. In the 15 west we are opening out a good branch of ore, and so far as I can see to-day I think it worth 10l. per fm.; the piece we have opened is 12 ft. behind the lode, and the ore continues at each end of the cutting; I have, therefore, ordered the men to open out the side at a long back to the stopes, which is 12 fms. high, so that, presuming upon its continuance from the end back to the stopes, it will give us an important piece of ground for stopping. The end is now 41 fms. west of the shaft, and we have an ore lode for nearly this distance, so that our prospects at the next level are indeed good. There is no alteration in Oliver's level, or in Tank's cross-cut, but are progressing as usual. I should mention that in the 15 we have laid down a good tranway through the level, which greatly facilitates the removal of the stuff from the different points here.

**DEVON AND CORNWALL UNITED.**—T. Neill, May 16: The 24 cross-cut north still produces stones of copper ore in the capel.—William and Mary: The 24 cross-cut north is sinking, sinking below the 34, is looking very promising. The lode in the 34 end is worth 5 tons of ore per fm. The stopes in the back are worth 7 tons per fm.

**EAST BOTTLE HILL.**—J. Eddy, May 17: For the last fortnight we have had six men driving east of the western shaft on the course of the lode in the 10; the lode now in the present end is about 15 in. wide; the tinstuff now breaking is of low produce. The masses are now getting on as fast as possible with the walls of the wheel-pit. The water-wheel, with all the stamping gear, are now on the mine.

**EAST CARADON.**—J. Treacot, May 16: Caunter Lode: The 80 east is worth 12l. per fathom; the 90 east, 16l. per fm.; and the 90 west is producing stones of ore.

**South Lode:** The 60 east produces stones of ore; the 70 east is worth 10l., the 70 west, 8l. per fathom; and the 80 east produces stones of ore.—New Lode: The 70 west is worth 6l. per fm.—Fawcett's Lode: The 70 west is worth 6l. per fm.

**EAST CHIVERTON.**—John Grose, J. Nancarrow, May 16: The same last January we have driven the 35 fm. level cross-cut about 60 fms., and the same is now extended south from engine-shaft 70 fms., and since we have passed through the elvan course we have opened about 10 fms. in a soft light blue clay-slate, which at present is letting out much water, and quite congenial for the production of silver lead ore in this district; this cross-cut is now driving by eight men, at 2l. 8s. per fm. The north shaft is situated about 13 fms. north of the engine-shaft, and the adit cross-cut driving 22 fms. north of the same through kila, and now driving by four men, at 1l. 15s. per fm. We have cross-cut at right angles north and south from engine-shaft 105 fms., but not yet intersected Chiverton lodes, and it only requires time and perseverance to intersect them. When looking at the promising channel of ground we have in these cross-cuts, especially in the 35 south, and being situated direct east from West Chiverton and Wheel Chiverton, and only 350 fms. from the latter, where the lodes are already improving, we do not hesitate to say we have strong chances for early and good discoveries by the intersection of West Chiverton and Chiverton lodes, which must traverse our sett.

In conclusion, we beg to remark we cannot recommend a better or more economical method for developing the sett than by adhering to our present operations.

**EAST JANE.**—Jas. Seacombe, T. Hodge, May 12: Setting Report: The 48 to drive south on the western lode, by six men, at 2l. 10s. per fm.; the lode has been discovered by a crossing, but is now in more settled ground, and promises to again become productive very shortly. The 48 to drive south on the eastern lode, by six men, at 2l. 10s. per fathom, at present small, producing lead occasionally. The 36 to drive south, by two men, at 1l. 15s. per fm.; the ground continues very favourable, and the lode of a promising character. To sink No. 2 winze in bottom of the 36 south, by two men, at 2l. 5s. per fm.; the lode in this winze is yielding saving work for lead. The 48 end is 12 fms. behind this point.

**EAST ROSEWARNE.**—J. James, May 17: We have exchanged the sinking lift of pumps in King's shaft, and resumed sinking below the 55; the lode is 1 foot wide, producing stones of ore. In the 85, east of King's shaft, the lode is 8 inches wide, producing mende and a little copper ore. In the 85, west of King's shaft, the lode is 9 in. wide, producing rich stones of ore, and promising to be more productive shortly.

In the 85, east of Hallett's shaft, the lode is small and poor, but the ground is more congenial for copper than for some time past. In the 85, west of Hallett's shaft, the lode is more north by the side; we have had a good lode under this adit, worth 10l. to 12l. per fathom, and may expect it to be equally so over. This we shall prove shortly. The stopes in back of the 85, west of Hallett's, is worth 13l. per fm. The stopes in back of the 75, east of King's, is worth 14l. per fathom. The other stopes are much as last reported.

**EAST ST. JUST UNITED.**—J. Carthew, P. Casey, May 16: The Cranjick shaft, which is being sunk below the 20, is in a large kindly tin lode. In the 20, east from this shaft, the lode is 2½ ft. wide, with good stones of tin. In the 10 east the lode is looking well; and in the stopes over this level we have broken during the last week some very rich tinstuff. We hope to have Wheel Vent shaft through to the deep adit next week; we consider this part of the mine to be most promising for good returns of tin after a few months, as there is a good run of tin ground going down in bottom of the deep adit, but it will take us some time to lay the ground open so as to work it to advantage. Phillips' engine-shaft, which is being sunk below the 10, if the ground continues as at present, will be down to the 20 by the end of July. In a winze below the 10, to the west of this shaft, we have a good lode; immediately the shaft is down we shall extend a 20 fm. level under this tin. At North Boorne we are clearing up below the 20. In a winze to the east and one to the west of shaft we cannot yet say anything as to the value of the lode here. The general appearance of the lodes gives us every reason to believe that as they are further developed they will be found productive.

**EAST WHEAL RUSSELL.**—J. Goldworthy, May 16: Homersham adit shafts are making good progress in sinking below the 140. In the 140, east of Homersham's shaft, the ground in the cross-cut, driving north, is rather spare for progress. In the winze sinking below the 130, on the south part, the lode is 3 feet wide, composed of capel, quartz, and prlan, and producing good stones of yellow copper ore. There is no change in the stopes in the back of the 130 since last reported on. The lode in the rise in the back of the 130, east of Barkell's winze, is 3 ft. wide, worth 10l. per fathom, and by the sinking of the new shaft it is composed of gossan, quartz, green, black, and grey.

**EAST WHEAL VOR.**—Jas. Pollard, May 16: The ground in the 96 west is a little better for progress; lode 2½ ft. wide, composed of quartz, prlan, mende, kila, and occasional stones of tin. In the 60 east we have driven 2 fms. 3 ft. alongside the lode in a good stratum of ground, which is quite congenial in this locality for bearing tin. The men are engaged taking down the lode to-day. I will give you full particulars in my next how it looks.

**ELLEN UNITED.**—J. Tonkin, May 11: The lode we cut, named in my report of May 6, is a very promising one, from 15 to 18 in. wide, in a winze sunk 5 fms. below the bottom of the new shaft, it is composed of gossan, quartz, green, black, and grey ore, a box of which I have sent you per luggage train. We are now down to water, and obliged to suspend sinking the winze for the present, but hope as the dry weather appears to be settled in to resume sinking again shortly. I invited Capt. Delbridge on Friday last to go down and see the lode in the winze; he did so, and took with him to Redruth a sample of the lode not dressed, which was assayed by Mr. Andrew, and it produced 14½ per cent. I took another, washed it, and had it assayed by Mr. William Bray, of Chacewater, which produced 27; the prlan, with writings of both assayers, I have sent you per luggage train. We have also commenced sinking a winze, to cut the lode to see its nature, and found it very kind one; we commenced sinking the winze, which I have stated is 5 fms. deeper. I have now put the men to sink the shaft, which will take the lode in sinking 11 fathoms further, we shall then sink on the course of the lode as far as the water will permit us; I want to prove this beautiful looking lode, which is going down in virgin ground, and nothing done below.

On a parallel lode, a little to the south of this one, Capt. Boundy made a profit of 10,000l. above the adit level, which lode is in our sett, and not 1 foot sunk on any part of it, but must be a continuation from this point, as there is no sign of the white shaft. Willoughby, an old tributer in this mine for great many years, told me he worked there, and knows all about it, and pointed out a winze-shaft, which is sunk 7 fathoms below the adit, and by sinking this shaft about 10 fathoms more we shall have this lode in the shaft, leaving about 30 fathoms of backs on the course of this lode between this point and the adit, which is all in virgin ground for the whole length of the sett.

The reason I mention this is why should not the lode we are working on do the same? We have sunk about 10 fathoms more to sink in to the adit level. We have sent 60 fms. to the west of the great course, and 37 fms. to the west of the white shaft, which is sunk to the adit level, but there is several fathoms of stuff in this shaft, which must some time be cleaned up. I now purpose to do so, and drive a level back at the depth of the adit under our present workings; we shall then be able to sink the winze, and prove the lode about 11 fathoms deeper. We have again resumed the driving of the 22 fm. level towards the new shaft; lode 1½ ft. wide, composed of gossan, quartz, yellow ore, and kila, but not rich. However good or bad the lode here may turn out, we must be a continuation from this point, as there is no sign of the white shaft.

Of the mine as the air is very bad. Since our last report we have cleared out and secured about 100 fathoms of the main adit, finished the foundation for engine-house, cleared out from the quarry about 800 tons of rubble, levelled a large place for lodging stone for building, drove the 22 fm. level 7 fms., sunk the new shaft 2 fms., the winze 5 fms., and secured other sundry jobs at surface. We commenced building engine-house on Tuesday last, and hope it will all be complete in about three months, as we have a splendid quarry. We have now on the mine about 400 tons of quarry stone and 40 of granite, railings for scaffolding, timber, shovels, barrows, &c., for building purposes, besides a good lot of smiths' and miners' tools. Number of men now and how employed—sinking new shaft, six men, at 2l. 10s. per fm.; driving the 22 fm. level, four men, at 3l. per fm.; various work at surface, two men; carpenter, one man. I have suspended the adit for the present, although we shall have to clear and secure a little more before the engine is set to work.

**FRANK MILLS.**—J. P. Nicholls, J. Cornish, F. Cornish, May 16: The ground in the 130 rise, by the side of the west lode, continues of the most favourable description, and good progress is, therefore, being made. In the 130 north the east lode is again rising, and consequently becoming more productive. We have also commenced driving this lode in this level on the adit (east lode) where it is looking well, and yielding fully 1 ton of lead ore per fathom. The 115, driving north on the west lode, continues to present a very favourable appearance, and it is still yielding saving work, with every prospect of an early improvement. There is no change in the winze sinking in the bottom of this level. The stopes in the back of the same level is yielding ¼ ton of lead ore per fathom on an average. We have this day commenced a stopes from the last-named stopes, but no lode has yet been taken down. There is no change in the 100 south since last report, and the two stopes in the back of this level are yielding about the same quantities to lead ore as the north ¼ ton of lead ore per 2 cwt. per fathom. We have suspended the 45 cross-cut west, and also the end we were driving south from this cross-cut, for the purpose of concentrating our forces, to push the end northward with all possible haste, in order to communicate with our workings south from middle air-shaft, for ventilation, &c. This operation we believe will lay open good tribute ground, the lode in the present end yielding quite 4 cwt. per fathom. The three stopes in back of this level, in the northernmost part of the mine, are yielding respectively ¼ ton, ¼ ton, and ¼ ton of lead ore per fm. The old pitch referred to as having improved in the 130 is now producing.

**FURSDON.**—J. Collins, May 16: The ground in the shaft is very hard and spare for sinking, but yielding good spots of ore. The 31 west is in hard capel, with spots of mende and copper ore occasionally; very promising ground for ore, but progress slow; we wish to see the result of this change of ground before we commence cross-cutting. We have set an end to drive east at the 11, by two men and two boys, at 2l. 5s. per fm., and are to-day preparing to stop the back of the tributers' workings above the 11 by two men and two boys. We expect to sample for this month about 35 tons of ore.

**GAWTON COPPER.**—G. Rowe, G. Rowe, Jun., May 12: The 60 cross-cut, north from the 100, is being pushed by four men, and is now a possible winze; the ground, however, is rather stiff, owing to some loss of spar, which we regard as only temporary. The lode in both the 50, east and west, is yielding about 3 tons of ore per fathom. The lode in the rise in back of the 50 west is worth 4 tons of ore per fathom. The lode in the rise in back of this level is worth from 4 to 5 tons of ore per fm. The lode in the winze sinking below the 35 is worth 4 tons of ore per fm. The 50, west from old dump, is now nearly clear to the present end, and will be pushed by a full pair of men with all possible dispatch to get under the winze sinking below the 35. We have to-day started the steam-winch, which has gone off in first-rate style, but it will occupy nearly another week to get pippet-heads, &c., in proper order to commence; we shall then commence fixing the boiler to the pumping and drawing-engines, which will complete all our required machinery, and every department will be in first-class condition.

**GLASGOW CARADON CONSOLS.**—Wm. Taylor, May 15: In the 78 we have cut the main part of the caunter lode, and have commenced driving west on its course, which is producing stones of ore and letting out water freely; we are yet in the influence of the cross-course; in opening off it we expect to find the lode productive, as in the levels above. McClure's lode, in this level, is producing stones of ore, but is still discovered by the cross-course. The 65 fm. level, with 16l. per fm., a very fine looking lode, and likely to improve. The winze in bottom of this level is worth 12l. per fm. In the 52 west there is a good branch of black ore in the bottom part of the end, with a very promising appearance. The stopes throughout the mine are looking very well, varying in value from 10l. to 30l. per fm., and producing about the usual quantities of better quality ore. We are getting on favourably with dressing for next sampling.

**GOTHIC.**—J. Lester, May 16: Our managing director was at the mine last week, in consequence of a change in the lodes of the 25, which I had reported, as well as in the 30, where the lode continues to improve, it being now 3 feet wide, worth for lead the nearly 1 ton per fm. There is no further alteration to note in the cross-cut from the 25, nor in the adit level west; we expect to complete the driving the cross-cut to surface by the end of the month, which will greatly facilitate our conveniences for raising and dressing the ore.

**GREAT BRIGAN.**—J. Treddinick, May 16: We are now taking down the lode in back of the 10, west of the new shaft. The lode in each stopes, east and west of No. 1 winze, is worth on an average for copper ore 8l. per fathom. This shoot of ore is making west towards the elvan course, and I believe good bunches of copper ore will be met with in that direction near the surface.

**GREAT LAXEY.**—R. E. Rose, May 14: Since our last report by Capt. Barkell I am unable to state any particular change in the mine. The engine-shaft is again under way sinking below the 210 with a full pair of men. The 210, driving north, is in a large lode, worth 1 ton of lead and 6 tons of blende per fm. The 193, driving north, has a lode 4 ft. wide, worth 80l. per fm. The lode in the stopes above this level, 10 ft. wide, worth 2 tons of lead and 12 tons of jack per fm. The 180 and 165 fathom level ends, driving north, are without any change to report, and the 155 continues to improve, now worth 40l. per fm. In the south ground we have no change yet in the 200 fm. level end, but the 190 fm. level end is further improved, now worth 8 tons of copper per fm.; and the 182 being driven south of the side is worth 3 tons per fm. The lode in the 60, driving south towards the corner shaft, is worth 80l. per fm. for lead and jack. At Dumbell's the 110 fm. level end, driving north, holds its value of about 40l. per fm., and some of the stopes in the roof of this level are worth 200l. per fathom. The 85 fm. level ends, both north and south, are to-day worth 100l. per fm. each. We have no change in the 70 north, but the 60 is getting into a larger and productive lode, and I expect will go on further to improve. Our lead raisings for this month I expect will be close upon 200 tons; and, therefore, beyond any returns before made, at Glenroy the work necessary for the erection of the water-wheel, &c., is being pushed forward, and will, on our part, be completed within the time specified for setting up the machinery.

**GREAT MOELWYN SLATE COMPANY.**—A. C. Langton, May 14: We have been making very favourable progress with the works. No. 2 chamber, No. 2 level, has been pushed on very fast, though but few men are at work here. In No. 4 level, No. 2 chamber, there is not much change since last report, but from appearances we expect an improvement in the quality of the slate. The slate made during the month was very good, and there is now a decided improvement in the quality of the slate, being more regular, owing to the extreme dryness of the weather. The lake has lately been rather low, causing us some uneasiness as to whether there would be sufficient water for the turbine, but a few heavy showers, which fell lately, have quite replenished our water supply.

**GREAT NORTH DOWNS.**—T. Rich, M. Jenkin, May 16: There are cross-cutting through the lode in the 70 end, west of Sleggan's shaft, consequently there is no alteration to report in this end, and since last report. The 60 west is worth 8l. per fathom, and the lode very promising. The stopes in back of the above level are worth 10l. per fathom. The water in Sleggan's shaft is gradually going lower, and we hope to be able to resume operations here very shortly. We are urging on the fixing of the skip-rod in Butler's shaft without delay.

**GREAT NORTH LAXEY.**—R. Rowe, May 15: The lode continues 6 feet wide in shaft, and worth 2 tons of lead per fathom. In the 72, driving north, the lode is 3 ft. wide, of a most promising character, and worth 1 ton of lead per fathom. The stopes in the 60 are worth from 1 to 2 tons of ore per fm. No change this week elsewhere.

**GREAT SOUTH CHIVERTON.**—J. George, May 14: We have commenced opening west on the lode, and have driven 5 ft.; it has greatly improved, is from 4 to 5 ft. wide, and contains more lead than we have before seen; by its appearance I think we shall shortly get to something to value. We have driven 5 ft. north of the wall, and passed through some good branches of lead, but have not yet met with any more lode.

**GREAT SOUTH TOLGUS.**—J. Daw, May 16: Friday last was setting-day: In the 166, east of Lyle's shaft, the lode is 2 ft. wide, producing 1¼ ton of ore per fm.; set to four men, at 5l. per fm. In the rise in the back of the 166 the lode is 1½ ft. wide, producing 1 ton of ore per fm.; set to four men, at 5l. 10s. per fm. In the 164, east of new shaft, the lode is 1 ft. wide, producing stones of copper ore; set to six men, at 8l. per fm. In the 154, and west of new shaft, we have commenced to sink a winze, where the lode is 2 feet wide, producing 1 ton of ore per fathom; set to six men, at 5l. per fm. In the 140, east of new shaft, the lode is 1 ft. wide, unproductive; set to six men, at 5l. per fm. In the rise in the back of the 125, against Noel's shaft, the lode is small and unproductive; set to eight men, at 14l. per fm.

**GREAT WHEAL BAUDERN.**—R. Pryor, H. Trengolina, May 13: In the cross-cut south of Hill Brothers engine-shaft, at the 75, the ground is much the same as when last reported on, and the end is in a large congenial elvan course for lead, which is looking promising for a rich and productive lode in a short distance further driving, which will now soon be accomplished; the water is issuing from this point in immense quantities. In the 63 cross-cut, driving south of shaft, the ground is without alteration during the past week; water is flowing freely from the end.

**GREAT WHEAL BUSY.**—W. Rich, J. Treddinick, C. Bawden, May 12: There is no material alteration in the 130 end, east of Offord's shaft, since our report of last week. In the 130, east of Offord's shaft, the lode is 1½ ft. wide, worth 12l. per fm. The stopes west of winze is worth 10l. per fm. The 110 end, east, on the south lode, is yielding good stones of copper and tin. A stopes in back of the level, behind the end, is worth 7l. per fathom. We have commenced to sink a winze on this south lode, where it branched off at the 90, and have sunk 6 ft.; at this depth the lode looks very promising, and is worth 15l. per fathom for tin. The lode in bottom of the 100, west of Walker's shaft, is worth 15l. per fathom. A stopes in back of the said level is worth 10l. per fm. The 90 end, east of Walker's, is yielding stones of tin, but not to value. The tribute pitches are looking much the same as usual.

**GREAT WHEAL VOR.**—Thos. Julian, S. Harris, J. James, May 16: Metal engine-shaft is sunk about 8 fms. 5 ft. below the 194; the ground is favourable for sinking, and we expect to be prepared to cross-cut towards the lode in the 204 in about another month. The 194 west is improving in appearance, letting out more water, and yielding more tin; the lode is about 1 ft. wide, worth 12l. per fathom. We are continuing the 194 east towards the winze, which has been sunk sufficiently deep from the 184 to the 194, and has still a good lode in the bottom, and as soon as the end is communicated with the winze we shall be able to report a good lode in the 194 end. The lode in the 184, east of the 194, is 2 ft. wide, worth 50l. per fathom. The lode in the 182, east of the 194, is 1 foot wide, worth 30l. per fm.; this is the winze referred to above, which is being sunk to the depth of the 194, and in advance of the present end. The lode in No. 3 winze, in bottom of this level, is 2 ft. wide, worth 35l. per fathom. The lode in No. 3 winze, in bottom of the 184 west, is 5 ft. wide, worth 120l. per fathom. The lode in the 181, west of Metal shaft, is 2½ ft. wide, worth 70l. per fathom. The lode in the 174 west is 3 ft. wide, worth 60l. per fathom. The lode in the bottom of the winze, below this level, is 3 ft. wide, worth 70l. per fathom. All the stopes in this part of the mine are looking well, and yielding a quantity of rich tin stuff, which is now sinking in rich tin ground; the lode and branches are wide and good, and for the length of the shaft worth from 150l. to 200l. per fathom, and every indication for a further improvement. The 174 east is communicated with the 174 west, from Metal, with bore-hole; we shall hasten on the completion of this level as soon as possible to bring back the water—the lode is worth 70l. per fathom. The lode in the 174 west is 4 feet wide, very much improved, and producing rich stones of tin, worth 30l. per fathom; we are now most anxious to approach the dip of tin ground in this level, and cannot fail to have considerable length of rich ground before us in this level. The lode in the 162 west is wide and good. We are not yet clear of the slide, and the lode and branches together are worth 40l. per fathom. The stopes in this part of the mine are looking well. The pitwork in both shafts is in good order. We have no change to report in the 100 west.—New South Lode: In the 147, west of Metal, the lode is 3 feet wide, composed of mende and capel—a very kindly lode, producing tin of low produce. The lode in the 152, east of the cross-cut, is also 3 ft. wide; the same may be said of it as the 152 west, and yielding a quantity of rich tin stuff, which is now sinking in rich tin ground; the lode and branches are wide and good, and for the length of the shaft worth from 150l. to 200l. per fathom, and every indication for a further improvement. The 174 east is communicated with the 174 west, from Metal, with bore-hole; we shall hasten on the completion of this level as soon as possible to bring back the water—the lode is worth 70l. per fathom. The lode in the 174 west is 4 feet wide, very much improved, and producing rich stones of tin, worth 30l. per fathom; we are now most anxious to approach the dip of tin ground in this level, and cannot fail to have considerable length of rich ground before us in this level. The lode in the 162 west is



**WHEEL SPARNON.**—W. Tregay, E. Chogwin, May 12 : Jardine's Shaft: The 45 end to drive east of cross-cut, on N. side of shaft, by six men, at 11.18, per fathom. A stop in back of the same shaft by four men, at 11.10, per fathom. The 45 end to drive east of cross-cut, on S. side of shaft, by four men, at 11.10, per fathom. The 45 end to drive east of cross-cut, on N. side of shaft, by two men, at 11.1, per fathom.



elvan. The pitches east and west of Jardine's shaft, on Palsford's, are looking well, and tributors making fair wages. No other change to report.

**WHEAL TREMAYNE.**—R. Williams, May 18: On the new south lode we have driven the shallow level 4 fms. east; the lode in the present and is small, yielding saving work, and of a very congenial character for the production of mineral. Since last report we have sunk the shaft 4 ft.; the lode in the bottom of the said shaft is 20 in. wide, with 5 ft. per fathom, with a kindly appearance. The men are now engaged stopping the back, which is yielding good stuff.

**WHEAL UNION.**—T. Glanville, May 11: Tutwork Setting: The 100 to drive west of the flat-rod shaft, by six men, at 18s. per fathom; lode 3 feet wide, producing good stones of copper ore. The 76 to drive east of the flat-rod shaft, by six men, at 8s. per fathom; lode 3 feet wide, producing stones of copper and tin ore. The 56 cross-cut to drive south of the engine-shaft, by nine men, at 20s. per fathom. The winze to sink below the 80, on the flat-rod shaft lode, by four men, at 8s. per fathom. The 40 to drive west of the old engine-shaft, by four men, at 7s. per fathom. The 40 to drive east of the old engine-shaft, by two men, at 5s. per fathom. The 60 cross-cut to drive north, by six men, at 10s. per fathom. The 60 to drive east, on the new lode, by two men, at 6s. per fathom. The 40 to drive east, on the middle lode, by four men, at 5s. per fathom.

**WHEAL UNY.**—S. Coade, M. Rogers, May 12: The lode in the engine-shaft is of the same value as last reported—30s. per fm. for the length of shaft, 13 ft. The 120, east of engine-shaft, is worth 12s. per fm. The 110, east of engine-shaft, is worth 10s. per fathom. The 120, west of engine-shaft, is worth 9s. per fm. The lode intersected in the cross-cut north of the 80, east of engine-shaft, is worth 30s. per fm.

**CENTRAL AMERICAN ASSOCIATION.**—Very interesting information has been received by the directors of this company from their principal agent, Dr. Berthold Seemann, whose valuable services were secured last February. It appears that the announcement of the formation of this company has been received with marked approval in Central America, the leading men in New Granada, Costa Rica, and Nicaragua signifying their intention to support the company by every means in their power. Dr. Seemann also states that the Panama Railroad Company has given him free passes by rail and Central American steam vessels during his continuance in Central America. The company has also offered him hand cars and a special passage by steamboat if he chooses to inspect a celebrated sugar plantation and mining property on the Isthmus. Writing from Nicaragua, Dr. Seemann says that he considers the object of his mission already secured, several highly remunerative properties having been placed at the disposal of the association, and that he hopes shortly to return to England with the reports and provisional contracts. The President of Nicaragua, General Martinez, has taken great interest in the movement, having been most kind, and everywhere the name of Captain Bedford Pim, R.N., has been sufficient to obtain for Dr. Seemann from the Nicaraguans marked attention and respect. Central America no doubt offers an almost boundless field for enterprise, but, of course, there are properties which no amount of expenditure would render remunerative; hence it becomes of the greatest importance to use both discrimination and judgment, and it seems that the local knowledge, ability, and command of the Spanish language possessed by Dr. Seemann, added to the confidence engendered by the practical results aimed at on the part of the association which he represents, and which is controlled by gentlemen personally acquainted with the country, and highly respected by the natives, have tended to make his success, so far, most gratifying.

**CHONTALES.**—The news by the mail which arrived on Monday was the most satisfactory character. All at the mines were in good health and spirits, and the most active exertion was being made to get everything into proper working order, by the erection of new machinery and buildings, and making roads and water-courses. To attempt to return gold with the use of the old mills would seriously interfere with those operations for the purpose of enabling them to make large and regular remittances, which will commence in three or four months from this time. There is scarcely a doubt that considerable profits will be made even this year, which, during the next year, will be greatly increased. It will have been observed that the late unprecedented panic in the money and share markets has not in the least affected this company. It is admitted, even by many of those who have been trying to knock down the shares, that the price will be very much higher in a few months, and, therefore, bona fide holders should disregard present quotations, and the allurement held out to induce persons to sell. The "bears" have largely oversold, and are very active in their attempts to depreciate the stock, to save themselves from losses at the expense of the shareholders. For several months past a large number of shares have been borrowed for delivery, and this is increasing every account. Many shares are now required to be delivered, and on the "buying-in day," about the 25th inst., the "bears" will be in straits, and we hope will be made to pay well. It will thus be seen that the position of these speculators for a fall is daily becoming worse, for not only have they to find further lots of shares for the daily purchasers, but they have also to find shares to return those already borrowed, and which have gone into the hands of holders. As illustrating our remarks respecting the "bears" and their proceedings, we give the following from our contemporary, the *Daily News*, of the 17th inst.:

"There is an organised band of speculators 'for a fall,' partly within and partly outside of the Stock Exchange, who every now and then make a dead set against—or, in Stock Exchange parlance, 'bang'—the shares of some particular company. The mode of proceeding is very simple. A large number of these operators, acting, no doubt, in concert, make simultaneous sales of the shares of a company, perhaps the International Financial, or the General Credit, or the Credit Foncier and Mobilier, or the Imperial Mercantile, or Overend, Gurney, and Co., or the Alliance Bank—matters not what concern is selected, so long as there is a prospect that the simultaneous offer of shares in large numbers by several brokers will seriously depress the price, and this is easily accomplished in the present anxious state of the public mind. That the price should fall is natural, for there is a combination of sellers and no opposing combination of buyers. Very likely the sellers do not possess a single share, but that makes no difference, as the dealers do not know but that the sales may be bona fide, and they, therefore, in self-defence, put down the price. In some, though, we hope, rare instances dealers have themselves been parties to adverse combinations of this nature. The sole object of the speculator is, of course, to get a profit by buying back at a reduced price. The worst feature of the practice is, that all sorts of demoralising and unscrupulous devices are resorted to to aggravate the fall, such as rumours of impending calls, or of losses, or—if the company attacked be a bank—of a 'run' for deposits. It is beyond question that several important companies have lately been destroyed by these means, and it is necessary, therefore, that the public should be warned against attaching too much importance to sudden movements on the Stock Exchange, which are frequently no index whatever to the real position or merits of a company."

**ZACATECAS SILVER MINING COMPANY.**—In a letter received this week from Captain Paul, of the Chontales Mines, he fully confirms all he has said and written before respecting this wonderful property. He states that he has "not the least doubt of the mines being found exceedingly rich when drained to the bottom, the evidence at surface in the burrows, as also in the Government books, being a good guarantee. In fact, I believe that the Sombretete Mines (those of the Zacatecas Company) will vie in richness with any silver mines in the world." The importance of this statement may be understood from the fact that several silver mines in the same country are each giving upwards of 400,000*l.* a year in profits. A large portion of the capital of the Zacatecas Company is already subscribed, and as soon as the effect of the recent panic has passed away the whole will, no doubt, be rapidly filled up.

**THE TIN STANDARD.**—On Tuesday it was resolved to put down the standards for tin ores another 2s. per cwt. all round, which are now as follow:—Common, 73s. per cwt.; superior common, 74s.; fine, 75s.; superior fine, 76s. per cwt. This is not the worst feature; the market is so exceedingly weak that another fall is apparently quite imminent. The drop in the tin standards since January is rather over 12s. per ton. It appears to us that now is the time to practise the most rigid economy—revise salaries—pay all agents well, but discharge all unnecessary hands—look well into supplies—let no more materials be ordered than are absolutely required—see that the advertiser has every where value for his money—look well to dressing cost. We are thoroughly satisfied the adventurers in our tin mines have been cruelly sacrificed in consequence of the stupidity and carelessness of so-called tin-dressers. Ascertain in every mine the cost for every ton of tinstone returned. Can nothing be done to save expense in spalling tinstuff? We are told a profit could be shown on some mines in the saving under this head alone.—*West Briton*.

**BRITISH AND FOREIGN MINING FINANCIAL ASSOCIATION (Limited).**—Vice-Chancellor T. Kinderley has appointed Mr. W. H. McCraith, Raymond-buildings, Gray's Inn, official liquidator of this company.

**NORTHFIELD IRON AND STEEL COMPANY.**—The creditors are required before June 14 to send particulars of their claims to Mr. J. B. Gibbons, Bank-buildings, Louthbury, the official liquidator of the company.

**AXTON MINING COMPANY (Limited).**—The creditors are required before May 22 to send the particulars of their claims to Mr. Edwin Landy, Waterloo-street, Birmingham, accountant, the official liquidator of the company.

**At the Prussian Mining and Ironworks Company meeting, on May 7,** the report of the provisional committee was presented. It describes the formalities necessary according to the Prussian law (under which the company is established), which had been complied with. The properties acquired are—the Vulcan Ironworks, at Dulsburg, standing on 84 English acres, with iron mines in various districts, embracing all 100 squared fields, containing upwards of 18,500 acres, besides 13 iron vein concessions; the Castrop Colliery, near Castrop; and the Hanna Colliery, near Dortmund. The capital has been fixed at 120,000*l.*, of which 100,000*l.* (being 93,000*l.* in shares, and 7,000*l.* in cash) is applied in purchase-money, consequently 19,000*l.* is applicable to the purposes of the company. A call of 5*l.* per share (the second, at the rate of 10 per cent.) is made payable on July 20. In his opening address the president of the provisional committee (Mr. William T. Milvany) stated that the first call of 10 per cent. having been duly made had been satisfactorily paid to their bankers, and of the 4000 shares allotted 3180 were represented at the meeting.

With last week's Journal we gave a SUPPLEMENTAL SHEET, which contains—An illustrated description of the New Caloric Engine—Compressed Air Combustion Chamber; Valuable Mining Processes in America; Note on Coal and Cannel; Puddling Iron; Statistics of the Tin, Tin-Plate, and Copper Trades; What is Copper Used for? the Portuguese International Exhibition; the Smyrna, or Western Asia Minor, Coal and Iron Field; Mineral Industries of the Zollverein; Treating Auriferous Sulphurets; American Mining Statistics; Sales of Copper Ores; the Purchasers of Copper, Zinc, and Lead Ores; New Inventions, &c.

## The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, MAY 18, 1886.

COPPER.				BRASS.			
Best selected.	£	s.	d.	Per lb.	Per lb.	Per lb.	Per lb.
Tough cake & tile	89	0	0	Sheets	7	9d.	—
Burna Barre	86	0	0	Wire	8	3d.	—
Copper wire	90	0	0	Tubes	11d.	—	—
ditto tubes	10	13	—	STEEL.			
Sheathing & bolts	91	0	0	Swedish, in kegs (rolled)	13	0	0
Bottoms	96	0	0	" (hammered)	15	0	0
Old (Exchange)	77	0	0	ditto in faggots	16	0	0
IRON.				English, Spring	19	0	0
Best Welsh, in London	7	10	0	QUICKSILVER (per bottle)	7	0	0
ditto, to arrive	7	10	0	SPELTER.			
Nail rods	8	7	0	Foreign	21	0	0
St. Stafford, in London	8	15	0	To arrive	21	0	0
ditto	8	15	0	KING.			
Hoops ditto	9	15	0	In sheets	28	0	0
Sheets, single	10	7	0	TIN.			
Pig No. 1, in Wales	4	5	0	English, blocks	85	0	0
Refined metal, ditto	4	0	0	ditto, Bars (in barrels)	86	0	0
Bars, common, ditto	6	15	0	ditto, Refined	88	0	0
Do, march, Tynesore Ties	7	10	0	Banca	78	0	0
Do, in Wales	6	10	0	Straits	75	0	0
ditto Swed. in London	11	10	0	TIN-PLATES.			
To arrive	11	10	0	IC Charcoal, 1st qua. p. bx.	1	18	0
Pig No. 1, in Clyde	2	15	0	IX Ditto 1st quality	1	19	0
ditto, Co. b. Tyne or Ties	2	6	0	IC Ditto 2d quality	1	17	0
ditto, Nos. 3, 4, f.o.b. do.	2	6	0	IX Ditto 3d quality	1	17	0
Railway chairs	5	10	0	IX Coke	1	6	1
" spikes	11	0	0	IX Ditto	1	12	6
English Pig, common	2	10	0	Canada plates	1	13	0
ditto, ordinary soft	2	10	0	In London; 20s. less at the works.			
ditto (WB)	2	10	0	Yellow Metal Sheathing	1	1b. 8	4d.
Ditto sheet	2	15	0	Sheets	1	1b. 8	4d.
Ditto lead	2	10	0	Indian Charcoal Pigs	7	0	0
Ditto white	2	10	0	In London	7	0	0
Ditto patent shot	2	15	0				
Spanish	2	10	0				

\* At the works, 1s. to 1s. 6d. per box less.

**REMARKS.**—The events of the past week will long be remembered in the annals of the financial history of this country. The panic which took place at the end of last week has been almost unprecedented in the suddenness of its rise, and the almost equal suddenness in which it has been allayed. At one time it seemed almost as if all confidence was gone, and fears were entertained that the results would prove most disastrous; and when on Saturday the directors of the Bank of England announced a further advance in the Bank rate to 10 per cent., considerable alarm was at first entertained; but soon it became apparent that this was only a necessary measure, and when it became known that the Government had come forward to help by the suspension of the Bank Charter, the panic began to subside, and people began to look with greater calmness on the whole matter. It then appeared that a great deal of unnecessary alarm had taken place, and that matters were not nearly so bad as was at first feared; and from that time the state of things has gradually become better, and confidence in a great measure has been restored. It cannot, however, be supposed that so great a panic can have taken place without leaving results of a serious character behind, and we must expect that for some time business will be in anything but a flourishing condition, especially so long as the present high rate of interest continues. We have no doubt, however, that in the course of time matters will assume a more satisfactory condition, and that the final result of the present financial difficulties will be that a real benefit will accrue to the commerce of the country.

**COPPER.**—The market generally is quiet, although there is a little more enquiry, which is, however, at prices below the official rates.

**IRON.**—In Staffordshire the demand is quieter, and the orders in hand are few, and should the present state of things continue, there is no doubt that it will soon be seriously felt by the workmen. The collapse in Scotch pig-iron has somewhat weakened prices in Staffordshire, though not to any considerable extent. In Welsh there is no prospect of an improvement in the trade; on the contrary, matters are becoming more gloomy, and great uncertainty exists as to the future, in consequence of the fear of war, and the state of the Money Market. Several orders which were in the market on home account came in very slowly. The mills and furnaces, however, have been kept pretty fairly going as yet in the execution of several good old orders, and during the past week considerable quantities of rails have been shipped for the markets up the Baltic and to the East. Although with some of the foreign markets a satisfactory trade is being done, yet, on the whole, business on foreign account is rather quiet. In Swedish iron the market remains without change. In Scotch pig-iron at the commencement of the week a considerable business was done at 55s. cash, and the price gradually advanced to 56s. cash, but afterwards became easier, and the price dropped to 55s. 6d. cash, then to 55s. cash, and more recently to 53s. 6d. cash, and the last advices from Glasgow report the market to be weaker, and business done at 53s. 4d. cash.

**LEAD.**—The market is quiet, the present quotations being 21*l.* for common English pig, 21*l.* 5s. to 21*l.* 7s. 6d. for LB, and 22*l.* 10s. to 22*l.* 15s. for WB.

**TIN.**—There is no activity in the market; English can be bought at 2*l.* under the official prices. In Straits very little business has been done, and the uneasiness in financial matters has tended to weaken prices, and prevent operations. The present quotation is 75*l.* cash.

**SPELTER.**—The fear of war breaking out on the Continent is very prejudicial to business in this metal, and causes the market to remain very dull, with very little business. The present quotation for parcels on the spot is still 21*l.*

**TIN-PLATES.**—There is much less business doing, and, consequently, prices are much less firm.

**STEEL AND QUICKSILVER** have undergone no change.

## THE IRON TRADE.—[GRIFFITHS'S BI-WEEKLY REPORT.]

**WOLVERHAMPTON, MAY 17.**—The Iron Trade of North and South Staffordshire has passed through the first week of the financial crisis satisfactorily. In a district like ours, where great numbers of large and small concerns are engaged in the manufacture of all kinds of iron, large foundries, besides thousands of minor manufacturers of different kinds of hardware goods, engine-shops, glass-works, earthenware and china in the North; forged and cut nails, patent nats and bolts by machinery, in the South, where steam engines and boilers, sud-irons and three-legged pots, enamelled and tinned hollow-ware, bridle-bits and stirrup-irons, anchors and bradwads, cable chains and corkscrews, tea-trays and coal-boxes, indeed, everything in iron, from a needle to an anchor, are made for the world, and all this involving enormous sums for wages weekly, the financial crisis in London must of necessity have created considerable anxiety over the whole country, from North to South. But, as we have before stated, the iron trade here is sound. We have had no speculation here, no "pig-rigging," no "bill-rigging," thanks to the prudence of all our banks, and the careful and sound manner in which the ironmasters have conducted their business during the last six months. The week has passed over without a single mishap. All the bills due last Monday in London were paid with the greatest punctuality. It is true we have had a complete pause in business on the Wolverhampton and Birmingham Exchanges this week, buyers and sellers alike considering it most prudent to watch for a short time the financial process of purification now culminating in London. A meeting of the creditors of Gibbs Brothers took place on Monday 11*l.* in 1*l.* is offered, 5s. down, the remainder in six monthly payments. The creditors willingly accepted the offer; and the general feeling appears to be that Gibbs Brothers have done the best they could under the circumstances. A small failure in the chain trade took place at Dudley—liabilities 20,000*l.* The financial crisis, however, was not the cause of the failure, the parties having been on questionable credit for some time.

**BIRMINGHAM, MAY 18.**—Rylands' "Iron Trade Circular" reports:—Market limited. Caution amounting to distrust. The fall at Glasgow

having brought Cleveland iron into South Staffordshire, prices of pigs are uneasy. In manufactured iron dealings are not worse than they were before the panic.

**THE COPPER TRADE.**—Messrs. J. Pitts-Campbell and Co., of Liverpool, report:—But for the frightful state of panic which has arisen since our last, the news from the West Coast must have had a favourable effect on the market. As it is, all movements have been paralysed by the events which have occurred, necessitating the advance of the rate of discount to 10 per cent., and the suspension of the Bank Charter Act of 1844. The action of the Spaniards at Valparaiso would appear to indicate violent determination to inflict on the coast all the injury possible, and this bombardment would probably be followed by further similar destruction at the other seaport towns; but, in regard to the supply of copper produce, much depends upon their subsequent movements, and whether they will be content with this wanton policy and retire, or whether the blockade will still be continued. The sales during the fortnight have been as follows:—

April 30.	232 tons ore, on spot here, ex William Turner	£ 0	15	0	per unit.
April 30.	370 tons ore, on spot here, Pizarro	0	15	0	per unit.
May 7.	625 tons ore, at Swansea, ex Carmelita	0	15	0	per unit.
May 7.	269 tons regulus, at Swansea, ex Carmelita	0	15	0	per unit.
May 8.	50 tons bars, out of second hands	80	0	0	per ton.
May 9.	644 tons regulus, on spot here, ex Llama	0	15	0	per unit.
May 9.	414 tons regulus, on spot here, ex Santa Rosa	0	15	0	per unit.
May 9.	20 tons ore, on spot here, ex Mexican	0	15	0	per unit.
May 9.	340 tons ore (Cape) on spot here, ex Camilla	0	15	0	per unit.
May 9.	20 tons regulus (Cape), on spot here, ex Camilla	0	15	0	per unit.
May 9.	818 tons ore, on spot here, ex Albert William	0	15	0	per unit.
May 9.	50 tons ingots (Congo), on spot here	86	0	0	per ton.
May 12.	179 tons regulus, on spot here, ex Alacama	0	15	0	per unit.

Besides which, there have been two sales by ticket at Swansea, one on the 1st inst., realising an average unitage of 14s. 6d.; the other on the 8th inst., with an average of 14s. 11d. Quotations are 15s. to 15s. 3d. for ores and regulus, 80*l.* for bars, 86*l.* 10s. to 87*l.* for ingots, and 16s. nominally for barilla. Arrivals from the West Coast, South America, have been—

Ores.				Regulus.				Bars.			
Nauphante, Tongoy	600	240	—	55	170	—	—	—	—	—	—
Malpu, Tongoy	—	—	—	—	—	—	—	—	—	—	—
Yanwath, Islay	—	—	—	—	—	—	—	—	—	—	—
Halton Castle, Callao	—	—	—	—	—	—	—	—	—	—	—
Calabar, Huasco	285	415	—	—	—	—	—	—	—	—	—
Mary Lee, Huanillo	685	—	—	—	—	—	—	—	—	—	—
At Swansea—Carmelita, Tocopilla	625	270	—	—	—	—	—	—	—	—	—
Fathfinder, Caldera	—	466	—	—	—	—	—	—	—	—	—
Attford, Pena Blanca	—	718	—	—	—	—	—	—	—	—	—
Pantagonia, Cobija	430	—	—	—	—	—	—	—	—	—	—
Ismay, Caldera	—	255	—	—	—	—	—	—	—	—	—
Burns, Tongoy	182	322	—	—	—	—	—	—	—	—	—

Stocks in first and second hands of copper produce, Chilean and Bolivian, likely to be available—

Ores.				Regulus.				Bars.			
Liverpool	4395	4778	—	1936	456	—	—	—	—	—	—
Swansea	5668	6264	—	811	828	—	—	—	—	—	—

It is said that even Bank stock was unsaleable at one period this week; and it is no wonder that in the MINING SHARE MARKET great depression still prevails, and our quotations keep nominal. There seems, however, to be a better feeling abroad, and the *Times* evidently considers that the worst features of the panic have cleared away. The standard for copper ore remains stationary this week. West Chiverton keeps firm, at 68 to 70; at the meeting, on Thursday, the accounts—which we have not yet received in detail, and must defer any remarks upon them till next week—showed a balance in hand of 15,225*l.* 10s. 3d., after charging upwards of 2000*l.* extra costs for machinery, &c. A dividend of 35s. per share (5250*l.*) was declared, leaving a cash balance in hand of 9975*l.* 19s. 3d. The report of the mine is something extraordinary, the different points in operation being valued in the aggregate at 790*l.* per fm. The 100 fathom level is worth 80*l.* per fm.; the 100, west of the cross-cut, 80*l.*; the 90 west, 40*l.* per fm. The 110 is expected to be reached in about six weeks. The agents conclude their remarks by saying—"Looking at the additional extent of lead ground opened since the last meeting, particularly in the western part of the mine, with the valuable improvement in the 70 west, and the successful opening of the lode in the 100, we can confidently say our prospects were never so cheering, and the mine never at any former period looked so well as at present. Wheal Chiverton, 6 to 6*l.*; at the meeting a call of 10s. per share was made. The accounts showed a debit balance of 50*l.* 12s. 11d. The report shows the mine improved. Cookney's shaft, sinking below the 86, is down 6 ft. in a large, masterly lode, worth 2 tons of silver-lead ore per fm. Murray's shaft is also on a fine lode, and two winzes commenced below the 86 are worth, the one 5 cwt., and the other 12 cwt. per fathom. The 80, west of Cookney's, has been driven 12 fms.—7 fms. through a lode varying from 5 cwt. to 2 tons of silver-lead per fm. This mine is turning out just as we have frequently said in this article that it would. Chiverton Moor, 5*l.* to 5*l.*; at the meeting a call of 10s. per share was made; debit balance, 533*l.* 19s. 9d. The mine is improving, and when the dressing-floors are complete, and when erected, will make regular returns of lead. Bedford United, 15s. to 20s.; Chontales Gold, 3 to 3*l.*; Clifford Amalgamated, 7 to 8; Drake Walls, 5s. to 6s.; East Basset, 12 to 15; East Carr Brea, 1*l.* to 2*l.*; East Gunnislake, 5s. to 7s. 6d.; East Russell, 2*l.* to 2*l.*

Prince of Wales, 5s. to 6s.; at the quarterly meeting, on Thursday, the accounts showed a cash balance against the mine of 18*l.* 1s. 9d. The committee reported that they had purchased a good 26-in. cylinder steam-engine, with 8-tons boiler, for 200*l.*, payable in four months. Also that they had contracted to have it removed, erected, and put to work for 98*l.*, and estimating the cost of the house at 100*l.*, the whole would be complete for 398*l.*, and at work in about two months, after which good returns could be made. After charging this 398*l.* in the accounts, and also a month's cost not at present due, the total liabilities of the company are 464*l.* 14s. 11d., and a call of 6d. per share (317*l.*) was made. The report of the mine was of a most favourable character, and it seemed to be the general opinion of all who had seen it, that so far as at present opened, there is nothing like it in Devon or Cornwall, excepting Devon Great Consols. East Wheal Grenville, 1*l.* to 2*l.*; Frontino and Bolivia, 15s. to 20s. The suit between South Frances and West Basset seems to have come to a dead lock. The judgment was to have been given at the House of Lords on Tuesday last, but on Monday



quent reasonable caution. Irish enterprise and speculation could not escape full participation in the passing crisis, and all our markets for goods or securities have been much depressed, both as regards the amount of business transacted at ordinary times and the respective prices. Mining shares suffered with the rest, but to a much less extent than many other securities, particularly if we consider how circumscribed is the circle of moneyed men who can properly appreciate the value of these speculations. As money, however, became dearer, so were these shares more offered for sale, and the number of buyers diminished. The effect was obvious, though not so great as might have been expected, if well-established Irish mines were not looked upon by our shrewder financiers as very sound investments. The shares of the Mining Company of Ireland, which previous to the panic receded in consequence of adverse reports respecting the prospects of the metal market, suffered, of course, further depression, and went gradually back from 17s. 7d. (7s. paid), the quotation on the 4th instant, to 15s. 12s. 6d., from which price they have again recovered to 17s. 15s. buyers, and 17s. 6d. sellers, for account. The Wicklow Copper Mining Company's shares (2s. 10s. paid), which were done on the 4th at 24s. 12s. 6d. for cash and account, relapsed to 22s. and 22s. 6s. for cash, and 22s. 10s. for account, and have since gone up again to 23s. 15s. for cash, and 23s. 17s. 6d. for account. General Mining Company for Ireland shares were less subject to fluctuation, the decline being only from 3s. 5s. to 3s., at which they remain firm. Other mines were neglected, in consequence of the greater temptation for speculation offered by the two leading mines.

It is stated that the EHREHARDT'S PATENT GUNPOWDER COMPANY (Limited) have, in consequence of the present state of the money market, postponed their application to the public for subscriptions until a more favourable opportunity arrives. In the meantime the directors themselves are so confident of the success of the undertaking, that they will at once find the necessary funds for carrying on the business on a smaller scale than that proposed in the prospectus. They have arrived at this decision in consequence of the numerous applications which they have received from mines for a supply of the powder. Dr. J. Collis Browne, inventor of the celebrated "chlorodyne," has joined the board of direction, and the London and County Bank have been appointed bankers, in place of the European Bank (Limited).

At Truro Ticketing, on Thursday, 4945 tons of ore were sold, realising 17,945l. 10s. 6d. The particulars of the sale were:—Average standard, 115l. 2s.; average produce, 5s.; average price per ton, 3l. 12s. 6d.; quantity of fine copper, 241 tons 1 cwt. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Per unit.	Ore copper.
April 19.	3924	119 0 0	5 1/2	£3 18 6	14s. 0d.	£70 0 0
" 26.	2387	110 10 0	6 1/2	4 6 0	13 6	67 8 0
May 3.	3456	105 19 0	7 1/2	4 13 6	13 4	66 14 0
" 10.	1912	112 7 0	5 1/2	3 15 6	12 10	64 3 6
" 17.	4045	115 9 0	5 1/2	3 12 6	13 1	65 9 0

Compared with last week's sale, the advance has been in the standard 10s., and in the price per ton of ore 7d. Compared with the corresponding sale of last month, the decline has been in the standard 4l. 9s., and in the price per ton of ore 5s. 3d.

At the Devonshire Great Consolidated Copper Mining Company meeting, on Tuesday (Mr. W. A. Thomas in the chair), the accounts show that although the shareholders have received 5s. 3d. (5s. per share) as dividends during the year, there still remains a balance of 14,126l. 16s. 9d. The balance of assets over liabilities was 101,846l. 15s. The principal item in the report, which was adopted, was the authority to vote 500l. to the Royal United Miners' Association. Details in another column.

At East Pool Mine meeting the accounts for February and March showed a credit balance of 692l. 15s. 8d. The profit on the two months' working was 1068l. 2s. 11d. A dividend of 640l. (5s. per share) was declared, and 52l. 13s. 8d. carried to credit of next account. Capt. Garby, Maynard, and James reported upon the points of operation.

At the Miners Mining Company meeting, on Tuesday, the directors declared a dividend of 5s. per share, from the profits of last day quarter. The proceeds of the three months' working being of—

Lead ore.	Tons	1217	Valued at	£16,733 11 0
Blende. <td>684<td></td><td></td><td>£3,233 14 0</td></td>	684 <td></td> <td></td> <td>£3,233 14 0</td>			£3,233 14 0
Total. <td>1901</td> <td></td> <td></td> <td>£20,217 5 0</td>	1901			£20,217 5 0

At East Wheel Lovell meeting, on Tuesday, a dividend of 715l. (7s. 6d. per share) was declared. The mine is looking exceedingly well at all points.

At Wheel Kitty (St. Agnes) meeting, on Monday (Mr. T. Reece in the chair), the accounts showed a credit balance of 888l. 3s. 11d. The profit on the three months' working was 334l. 15s. 1d. A dividend of 1s. 6d. per share was declared. The report stated that the tribute pitches were quite as good as for many months past, and they were adding monthly to the reserves of ground, so that the mine was not being exhausted; and when a better price for tin was obtained they should be in a position to keep up the present quantity of tin, or might, possibly, increase it. There were 42 men on tribute, and 76 on tribute, with surface men and stamps' pare 100, thus making a total of 218.

At East Laxey Mine meeting, on Wednesday (Mr. J. Humby in the chair), the amount showed a balance of assets over liabilities of 1879l. 19s. 7d. The report and accounts were received and adopted. Details in another column.

At East Scafell Mine meeting, on Wednesday (Mr. Fauntleroy in the chair), the accounts showed a balance of assets over liabilities of 1119l. 5s. 4d. The report and accounts were received and adopted. Details in another column.

At Roskarnoweth Mine meeting, on Tuesday, the accounts for Feb. and March showed a credit balance of 322l. 2s. 2d. The outstanding calls are 474l. 5s. 6d. Capt. J. Vivian and Son reported that they propose at their next sitting-day to confine operations to such ground as will let on tribute.

At North Roskarn Mine meeting, on Tuesday, the accounts for Feb. and March showed a debit balance of 1436l. 6s. 3d. A call of 2l. per share was made. Capt. J. Vivian and Son, F. Hosking, and R. Angove reported upon the various points of operation.

At East Gunnislake and South Bedford Consols meeting, on Tuesday (Mr. R. McCallan in the chair), the accounts for the three months ending March showed a credit balance of 97l. 5s., and an estimated balance against the mine before the August meeting of 681l. 11s. 10d. A call of 4s. per share was made. Capt. Gard and Phillips reported that circumstances had prevented an arrangement with Wheel Russell for the use of their water-wheel and rods, but they hope shortly to be able to arrange so as to drive under the ore they have discovered in the adit on the Impham lode, and which would be a mutual advantage.

At South Condor Mine meeting, on Tuesday (Mr. Buckland in the chair), the accounts showed a credit balance of 166l. 14s. 1d. A call of 1s. 6d. per share was made. The report appeared among the Mining Correspondence.

At Carnyorth Mine special meeting, on May 11, it was resolved to suspend operations and liquidate at once. The debt to the bankers is 1842l. 19s. 3d. The meeting considered it quite impossible to carry on the further operations of the mine except at a monthly loss: 1642 shares were represented at the meeting.

At Wendron Consols meeting, on May 11, the accounts for the three months ending November showed a debit balance of 1079l. 12s. 10d. A call of 1l. per share was made. It was resolved, after explanations given, that the sale of the tin levings was highly beneficial to the mine, and that there is no ground whatever for imputing blame to anyone connected with the transaction.

At New Wheel Lovell meeting, on May 3, the accounts showed a debit balance of 745l. 1s. 8d. A call of 4s. per share was made. Capt. Joseph Prike reported upon the various points of operation. They have 69 hands employed. Capt. Thomas Gill reported that the prospects of the mine throughout are very encouraging, and he has no doubt that it will pay dividends after a short time. All the machinery is in very good repair, and working well.

At Reinnie Laxey Mine meeting, on Thursday (Mr. Housman in the chair), the accounts showed a balance of assets over liabilities of 3617l. 13s. 5d. The report and accounts were received and adopted. Details in another column.

At Great East Lovell meeting, on Tuesday, a call of 5s. was made.

At Carn Brea Mine meeting, on May 11, a call of 2s. per share was made. It is considered that, with the present price of tin, a call of 250s. per month must be expected. The mine, however, is looking well, and machinery in good order.

On the Stock Exchange there has been a good demand for mining shares during the week. The following quotations were officially recorded in British Mining Shares:—East Grenville, 5s.; Devon Great Consols, 50s. 510; East Caradon, 5s. 5d.; Great Laxey, 21s.; Wheel Buller, 12s.; Great Wheel Vor, 16l. 17l. 18l. 16s.; East Bassot, 14s.; Tincroft, 10s.; West Caradon, 7s.—In the Colonial Mining Shares the prices were:—Cape Copper, 9s. 9d. 9s. 10s.; Port Phillip, 4s.—In Foreign Mining Shares the prices were:—Chontales (Gold), 3s. 2s. 2s. 2s.; Don Pedro North del Rey, 4s. 4s. 4s. 4s.; St. John del Rey, 4s. 5s. 5s. 5s.; Washoe Gold, 1s. 1s. 1s. 1s.; Alamillo, 1s.; United Mexican, 1s.; Cobra Copper, 13s.

The Bank of England return for the week ending on Wednesday evening is, upon the whole, satisfactory. The authority to suspend the Bank Charter had the effect of instantaneously allaying the panic, but at the same time the operations of the week afford incontestable evidence of the necessity for the existence of such power and restrictions as the Act of 1844 gives. It may safely be concluded that, although the power to exceed the prescribed limit at once restored confidence, the result of the panic would have been a hundredfold more severely felt had the recommendations so freely given by pamphleteers and others eight or ten years since—to repeal the Act altogether—been adopted. The changes shown in the several items of the return are more remarkable than ever previously. In the ISSUES DEPARTMENT there has been a decrease of 442,895l. in the notes issued, represented by a corresponding decrease in the "coin and bullion" on the other side. In the BANKING DEPARTMENT there has been an increase in the "rest" of 105,825l., an increase in the "public deposits" of 154,392l.; an increase in the "other deposits" of 5,105,135l.; and an increase in the "seven day and other bills" of 67,567l., equal to a total increase on the liability side of 5,432,909l. The principal change, however, is on the other side, where there has been an increase in the "other securities" to the unprecedented extent of 10,099,042l., showing a decrease in the reserve of 4,609,935l.

At the London and Venezuela Bank (Limited) general meeting a dividend at the increased rate of 7 per cent. per annum was declared, and 219l. 12s. 9d.

carried to profit and loss new account. It was mentioned that the issue of notes has increased 47 per cent. as compared with the amount stated at the last half-yearly meeting, while the increase in the profits represents 40 per cent. The expenses of management are about 6000l. on a floating business of upwards of a quarter of a million. In reply to a question, the Chairman, Mr. H. A. Hankey, said he had not the slightest idea that any call will be required.

At a meeting of the principal shareholders of the Oriental Commercial Bank (Limited), hastily convened yesterday, it was unanimously resolved, on the report of the directors as to the state and prospects of the bank, that its operations should not be in any way suspended, and that the necessary funds for that purpose should be forthwith contributed by its proprietors.

COAL MARKET.—The fresh arrivals this week amounted to 110 ships. The demand for house coal has not been so active, and prices quote to-day a reduction of 3d. per ton. Hartley's have continued steady, at last quotations. Hetton Wallsend, 18s. 6d.; Haswell Wallsend, 18s.; South Hetton Wallsend, 18s.; Hartlepool Wallsend, 17s. 6d.; Kellow Wallsend, 16s. 6d.; South Hartlepool Wallsend, 16s. 6d.; Hetton Lyons Wallsend, 16s.; Hartley's Hartley, 17s.; 6 cargoes unsold; 40 ships at sea.

EXPORTS OF PIG AND PUDDLED IRON.—The value of the exports of pig and puddled iron from the United Kingdom has immensely increased of late years. In 1850 this value was 348,074l.; in 1851, 452,119l.; in 1852, 557,586l.; in 1853, 1,056,310l.; in 1854, 1,244,853l.; in 1855, 1,072,428l.; in 1856, 1,385,118l.; in 1857, 1,609,115l.; in 1858, 1,084,170l.; in 1859, 901,329l.; in 1860, 974,065l.; in 1861, 1,044,304l.; in 1862, 1,303,641l.; in 1863, 1,287,968l.; in 1864, 1,412,352l.; and in 1865, 1,591,063l. For the first three months of this year the value of the pig and puddled iron exported was 298,452l., as compared with 252,686l. in the corresponding period of 1865, and 256,639l. in the corresponding period of 1864. Nearly as much pig and puddled iron is thus now exported in three months as was formerly sent abroad in twelve months. So much for values. The quantities of pig and puddled iron exported year by year since 1850 have followed in the annexed progression:—1850, 141,973 tons; 1851, 201,264 tons; 1852, 240,491 tons; 1853, 333,585 tons; 1854, 293,432 tons; 1855, 291,776 tons; 1856, 357,326 tons; 1857, 422,086 tons; 1858, 363,143 tons; 1859, 316,376 tons; 1860, 342,556 tons; 1861, 388,004 tons; 1862, 444,708 tons; 1863, 466,423 tons; 1864, 465,985 tons; and 1865, 543,018 tons. In the corresponding three months of 1866 the exports of the same class of iron footed up to 87,271 tons, as compared with 88,993 tons in 1865, and 82,925 tons in 1864 (corresponding periods).

EXPORTATION OF FUEL.—In the year 1865 the quantities of coals, cinders, culm, and patent fuel exported from the United Kingdom were:—Coals, 8,661,403 tons; cinders, 294,529 tons; culm, 14,545 tons; and patent fuel, 112,737 tons. The quantities of coal and patent fuel brought to London in 1865 were:—Coal 5,909,940 and patent fuel 12,420 tons.

DEALING WITH COAL WITHOUT A PIT NOTE.—In the appeal case of Wilson v. the Local Board of Health for Hull, the appellant had coals at a pit, and conveyed them in his own keels to Hull, where they were transferred into a steamer, also belonging to the appellant, for the purpose of being used by him. It was held, by the Court of Common Pleas, that this amounted to a "dealing" with the coal, so as to render the appellant compellable to show a pit note under section 7, and to pay a tax under section 8, of 26 and 27 Vict. c. 32.

ITALY.—A MINING ENGINEER, proceeding at once to Italy on special business, is OPEN TO TRANSACT for any party MATTERS entrusted to his care.—Address, "Italy," E. J. Bear, 59, Great Russell-street, Bloomsbury, London.

COPPER MINE IN GERMANY.—A COPPER MINE IN RHENISH PRUSSIA, at two hours' distance from the Rhine, producing from 20 to 24 per cent. pure copper, and possessing all necessary houses and machinery, is, on account of the advanced age of the proprietor, TO BE SOLD on moderate terms.—Plans and descriptions by English engineers can be had on application by letter, addressed "F. W. P.," 138, Leadenhall-street.

TO MANUFACTURERS OF CAST STEEL.—WANTED, a SITUATION, by a person who has had five years' experience in melting furnaces, forges, and rolling mills.—Address, "E. S.," Box 21, Post-office, Sheffield.

TO COLLIERY AND ESTATE PROPRIETORS.—A GENTLEMAN, who has had several years past proprietorship and the active management of an important colliery in the Midland Counties, from which he has recently retired, and who is perfectly conversant with Land and Mine Surveying and the practical working of collieries, is DESIROUS OF MEETING with an ENGAGEMENT. Ample references will be given.—Apply to Messrs. WOODHOUSE and JEFFCOCK, Mining Engineers, Derby; or to Messrs. CALDWELL and CANNING, Solicitors, Dudley.

THE MANAGER OF one of the ABERDEEN STEAM COAL COLLIERIES is OPEN FOR ANOTHER ENGAGEMENT. First-class references, and satisfactory reasons for wishing to leave present situation, will be given.—Address, "F. O. B.," MINING JOURNAL office, 26, Fleet-street, London, E.C.

WANTED, a SITUATION as CASHIER or BOOK-KEEPER, by the advertiser, who has had many years' experience in mining accounts. No objection to abroad. Testimonials as to character and ability the highest.—Address, in first instance, "Libertus," MINING JOURNAL office, 26, Fleet-street, E.C.

WANTED, TO CORRESPOND with one or more GENTLEMEN who would be WILLING TO INVEST in the OPENING UP of a VALUABLE COAL FIELD, in extent 3000 acres, containing all the well-known seams of the North Wales coal district. Capital required, probably 35,000l. to 40,000l. The Great Western Railway runs through the property. The rapid exhaustion of the coal fields of Lancashire and North Wales renders any really good estate all the more valuable.—Address, "G. G. C.," MINING JOURNAL office, 26, Fleet-street, London, E.C.

WANTED.—A GENTLEMAN, of 20 years' experience in the commercial, mining, and smelting business, is DESIROUS OF AN ENGAGEMENT as SECRETARY, BOOK-KEEPER, or ADVISER to COMPANIES, MINING MANAGERS, or SHAREHOLDERS. Fluent speaker, writer, and auditor. High testimonials.—Address, "Secretary," MINING JOURNAL office, 26, Fleet-street, E.C.

A GENTLEMAN, of considerable experience in Mining, OFFERS his SERVICES to a COMPANY or PRIVATE PARTY to EXPLORE the MINERAL RESOURCES of any FOREIGN COUNTRY. Can assay the different metals. Refers to the most eminent mining engineers in Devon and Cornwall. Apply to "Miner," MINING JOURNAL office, 26, Fleet-street, London.

A GENTLEMAN having an extensive connection with Merchants, Manufacturers, and others, would be GLAD TO UNDERTAKE the SALE of PATENTED ARTICLES or INVENTIONS, on commission.—Apply to Mr. W. T. RAWLEY, patent and mining agent, 8, Small-street, Bristol.

TO NOBLEMEN, CLERGYMEN, OFFICERS, GENTLEMEN, FARMERS, AND TRADESMEN.—MONEY.—MR. ARTHUR GEORGE HEATHCOTE SMITH is instructed to LAY OUT LARGE and SMALL SUMS of MONEY upon every description of security.—Forward full particulars to Mr. ARTHUR SMITH, 17, John-street West, Thornhill-square, London.

MINING OFFICES, MANCHESTER. THOMAS MOLYNEUX AND CO., MINE AGENTS AND SHAREBROKERS. Reliable information can be obtained as to purchase and sale of shares. Offices of the Eilen United Copper and Zinc Mining Company (Limited), and Hazell Grove Silver-Lead Mining Company (Limited). THOS. MOLYNEUX, secretary, 38, Princess-street, Manchester.

NORTH OF ENGLAND MINING AND ENGINEERING OFFICES, MANCHESTER.

MESSRS. HARVEY AND CO., MINING ENGINEERS, AGENTS, AND SHAREDEALERS, CLARENCE CHAMBERS, MANCHESTER, are at all times in a position to deal in all the market Dividend and Progressive Mine shares, and also to advise on all mining matters, being practically acquainted with the business, and having a daily communication from the mining districts of Devon and Cornwall.

Messrs. HARVEY and Co. publish a monthly "Mining Circular," containing a valuable summary of mining information. Subscription, 6s. per year. Bankers: The Consolidated, Manchester; and the Alliance, Lothbury, London.

MESSRS. HARVEY AND CO., OF CLARENCE CHAMBERS, MANCHESTER, are anxious to state that they have NO CONNECTION with HARVEY AND CO., of HAYLE, and recently of Clarence Chambers, London, who supply mine materials.

MR. CHARLES BAWDEN, INSPECTING MINE AGENT, ST. DAY, CORNWALL, OFFERS HIS SERVICES TO CAPITALISTS SEEKING TO INVEST in bona fide MINES.

GOVERNMENT SECURITIES, JOINT-STOCK BANKS, RAILWAY DEBENTURES AND BONDS, COLONIAL SECURITIES, FOREIGN BONDS, AND BRITISH MINES.—Messrs. TREDINNICK AND CO., of 78, LOMBARD STREET, LONDON, E.C., may be consulted confidentially as to the eligibility of all bona fide investments. A selected list forwarded on application.

MESSRS. TREDINNICK AND CO., STOCK AND SHAREBROKERS, AND DEALERS IN BRITISH MINING SHARES, 78, LOMBARD STREET, LONDON.

"THE CITY HIVE."—A Journal of Commerce, Banking, and Mining. Price 1d.

WASHOE AND REESE RIVER MINES.—THE UNDERSIGNED, being established in GOLD HILL, near VIRGINIA CITY, NEVADA, as MINING SURVEYORS, CHEMISTS, and ASSAYERS, OFFER their SERVICES TO MINING COMPANIES and GENTLEMEN in ENGLAND, having interests in the above-named districts.

Mines examined and reported on, at a scale of charges which obviously ensures a large saving upon the costs (in fees and travelling expenses) of special agents sent from England. Teleg. (arriving from London in 14 days) promptly attended to. W. F. RICKARD, F.C.S., M.G.A., &c. (late Mitchell and Rickard, London). CONRAD WRIGAND (late Supervising Assayer of the United States Mint, San Francisco).

London Agent:—T. W. Burt, Esq., 19, Paternoster-row.

METROPOLITAN DISTRICT RAILWAY COMPANY.—At a SPECIAL GENERAL MEETING, held at the offices of the company, No. 6, Westminster Chambers, Victoria-street, on Thursday, the 17th May, 1866.

The EARL OF DEVON in the chair. The advertisement calling the meeting having been read, it was unanimously resolved: That the Bill now submitted to the meeting, intituled "A Bill to confer additional powers on the Metropolitan Railway Company; to enable such company to alter and improve portions of their authorised works, and to acquire additional lands; to confirm or authorise agreements with other parties; to extend the time for completing certain works; to amend the Acts relating to the company, and for other purposes," be, and the same is hereby approved.

METROPOLITAN DISTRICT RAILWAY COMPANY.—NOTICE.—The REGISTRATION and TRANSFER OFFICES are now REMOVED from Austin Friars to the company's offices, No. 6, WESTMINSTER CHAMBERS, VICTORIA STREET, WESTMINSTER. All stock and scrip holders are requested to send information as to change of address, 14 days previous to the issue of the interest warrants due on the 1st of July next. 6, Westminster Chambers, Victoria-street, S.W. GEO. HOPWOOD, Sec.

THE CHONTALES GOLD AND SILVER MINING COMPANY (LIMITED).—Notice is hereby given, that—

JOHN CHING, HENRY CADWELL, JOHN BRYANT, JAMES BOSANKO, and WILLIAM RICHARDS (Miners) from the neighbourhood of Cambrone, and under articles of engagement to the CHONTALES GOLD AND SILVER MINING COMPANY (LIMITED), did, while on their way to the company's mines in Nicaragua, ABSCOND from the steam-ship, "SOLENT," at JAMAICA. The above five miners having received money in advance, and having also broken their articles, subject themselves to a PENALTY OF ONE HUNDRED POUNDS EACH, and deprive their families of the home pay that had been reserved for them. Any person having cognizance of the whereabouts of the above-named miners are requested to send information thereof to me at this office. By order, J. JAMESON TRURAN, Secretary. 185, Gresham House, Old Broad-street, London, May 18, 1866.

THE GREAT BARRIER LAND, HARBOUR, AND MINING COMPANY (LIMITED).—Notice is hereby given, that the NINTH ORDINARY GENERAL MEETING of shareholders in the above company will be HELD on THURSDAY, the 31st day of May inst., at the offices, No. 8, Austin Friars, in the City of London, at One o'clock precisely.

By order of the Directors, J. H. MURCHISON, Secretary.

THE PESTARENA GOLD MINING COMPANY (LIMITED).—THE SHARE CERTIFICATES of the above company are NOW READY FOR DELIVERY, in exchange for the bankers' receipts. By order. Offices, No. 9A, Great St. Helen's, E.C., May 18, 1866.

EXTENSION OF TIME.

TEN PER CENT. GUARANTEED, with every probability of Twenty or Thirty, in the BUCKLEY MOUNTAIN, SANDYCROFT, FIRE-CLAY, COAL, AND IRONSTONE COMPANY (LIMITED).

Capital £20,000, in 4000 shares of £5 each.

Deposit on application £1 per share, upon allotment £2 per share; additional calls not to exceed £1 per share, at intervals of not less than two months.

For the convenience of shareholders, a limited number of paid-up shares will be issued, to which interest warrants at the rate of 10 per cent. per annum, for five years, will be attached. Earliest applications will have a preference.

Prospectuses, and every information, may be had by applying to Messrs. JOHN HITCHES and Co., the Eastgate, Chester.

TO MINE, SLATE QUARRY, AND RAILWAY COMPANIES.—CAPT. C. WILLIAMS is NOW OPEN TO UNDERTAKE ALL KINDS OF CONTRACTS, such as DRIVING LEVELS, SINKING SHAFTS, CONSTRUCTING WATER COURSES, CANALS, TRAMWAYS, &c., and ERECTING ALL SORTS OF MACHINERY for MINING and OTHER PURPOSES, having on hand at all times a first-class staff of miners and machinists, who will proceed to any part of the world upon the shortest notice.

N.B.—In all cases 30 per cent. will be left in hand until the work is complete.

Tyn-y-Wern, Taliesin, via Shrewsbury.

LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
May 7	Jalay Mining Company	67	£14 11 0	Walker, Parker, & Co.
11	Great Laxey	100	27 10 0	Sheldons, Bush, & Co.
14	Frongoch	60	12 15 0	Newton, Keates, & Co.
	ditto	60	12 16 0	ditto
	East Darren	37 1/2	16 5 0	ditto
	ditto	37 1/2	16 5 0	Sheldons, Bush, & Co.
	Cwm Erddin	45	17 6 0	ditto
	ditto	45	17 4 0	ditto
17	Frank Mills	40	18 5 0	Bury Port Co.
	ditto	65	12 16 6	Michell & Co.

BLACK TIN.				
Date.	Mines.	Tons c. q. lbs.	Price per ton.	Amount.
May 10	Wheel Trevenna	5 15 8	£25 5 0	£381 19 3—Daubuz.
14	Great Wheel Vor	70 16 1	11	£364 6 1—

COPPER ORES. Sampled May 2, and sold at the Royal Hotel, Truro, May 17.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Consols	130	£3 12 0	Marke Valley	37	£1 3 6
ditto	128	4 17 0	ditto	31	2 6 6
ditto	125	3 12 6	New Wheal Martha	82	1 11 0
ditto	123	4 7 6	ditto	65	1 2 6
ditto	121	4 9 0	ditto	60	1 7 6
ditto	119	3 10 6	ditto	42	2 12 6
ditto	118	3 14 6	ditto	40	1 3 6
ditto	117	4 16 6	ditto	37	1 10 6
ditto	114	4 8 6	East Caradon	89	4 4 6
ditto	108	3 10 6	ditto	80	3 17 6
ditto	107	1 0 6	ditto	70	4 3 0
ditto	103	4 11 6	ditto	64	4 5 6
ditto	98	4 11 6	Okel Tor	88	3 7 6
ditto	96	1 18 0	ditto	87	2 5 6
ditto	91	3 2 6	ditto	86	1 12 0
ditto	87	1 2 0	ditto	40	8 6 6
ditto	81	3 0 6	Wheal Friendship	80	2 4 6
ditto	54	1 5 0	ditto	68	4 17 6
ditto	48	12 7 6	ditto	42	13 8 6
ditto	38	2 10 0	Devon and Cornwall	88	3 9 6
ditto	28	9 7 0	ditto	52	1 19 0
ditto	23	4 3 0	ditto	42	1 6 6
ditto	22	1 6 0	East Russell	48	4 2 6
ditto	19	5 6 0	ditto	37	2 15 6
ditto	13	5 11 0	ditto	22	3 18 0
Hington Down	110	2 8 6	ditto	21	3 11 0
ditto	104	2 12 6	Bedford United	66	4 12 6
ditto	95	2 10 6	ditto	52	4 17 0
ditto	87	2 10 6	Wheal Emma	57	3 8 6
ditto	82	2 16 6	ditto	36	2 10 6
ditto	65	5 17 6	ditto	20	10 4 6
ditto	55	6 6 6	Lady Bertha	55	1 14 6
Marke Valley	96	3 2 0	Prince of Wales	40	9 7 6
ditto	90	3 0 0	ditto	6	10 17 6
ditto	60	4 4 0	New East Russell	33	5 15 6
ditto	59	3 16 6	Collacombe	9	2 6 6
ditto	50	5 0 6	Opie's Precipitate	3	21 0 0



## WATSON AND CUELL'S MINING CIRCULAR.

WATSON AND CUELL,  
MINING AGENTS, STOCK AND SHARE DEALERS, &c.  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

**MESSRS. WATSON AND CUELL** having made arrangements for transferring their weekly Circular, which has had so large a circulation during the past ten years, to the columns of the *Mining Journal*, their special reports and remarks upon Mines and Mining, and the state of the Share Market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. Watson, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1865), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. Watson was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON and CUELL have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON and CUELL they are emboldened to offer, thus publicly, their best services to all connected with mine-owners, and to have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON and CUELL transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON and CUELL also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON and CUELL are also daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommendations to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON and CUELL having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are enabled to supply shares in all the best mines at close market prices, free of all charge for commission.

"S. A."—Mineral Rights should be bought, and not sold, and for this reason—if news arrived that a property like Chontales has been obtained, shares might go to a very high premium.

CHONTALES.—"S. H.," "J. A.," and several other shareholders, inform us that for three weeks following they have received circulars from some unknown and anonymous correspondent, pressing them in very strong terms not to sell their shares; and not knowing why *strangers*, who do not even give their names, should take such an interest in their welfare, our correspondents ask us—First, the meaning of it all? second, whether we have the same opinion of Chontales that we have always expressed? and third, whether shares are likely to advance, or to be lower after the "bear" account is closed? We will answer the second question first. We have the same opinion that we have always had, that Chontales, when the machinery has been erected, and the mines in full work, will make one of the finest properties of its kind in the world. The directors circulated a report a few weeks ago, wherein they thought it would take eight months to get into regular working order, supposing that nothing occurred to delay the machinery in its transit up country. This is a much longer time than we at first anticipated it would take; and while we are confident in our own mind that in 12 months from this time shares will be double their present price; we cannot help thinking also, looking at the state of the commercial world, and the mining market in particular, that they will be lower when the "bear" account is settled; and, therefore, anyone selling 100 shares for cash and immediate delivery, will be able to buy them back, so as to put 50% in his pocket, besides having the use of his money for a month or two, which is a great desideratum in these times. We have thus answered the two principal questions put to us, candidly and fairly, and, of course, the remark of some persons will be at once—"Oh! Watson and Cuell have sold their shares, and want to knock them down!" Well, to save discussion on these points, we admit that we have sold, and confess that we also mean to buy back when we think the time has arrived. For some months we had a large number of shares in our names, which we could have sold at a high price, or could have lent them at 2s. to 3s. per share, from account to account. This we consistently refused to do, though it would have been very profitable to us, as it would have been aiding the "bears;" but we found, to our surprise, that others, whom we had little suspected, were lending and supplying the market; and upon this we made up our minds to sell at once, and buy back in a few months, before any extraordinary news could arrive, and others can do the same if they choose.

"CALLS."—We would say a few earnest words to shareholders generally on this subject, and ask them, if they wish to avoid debt, and consequently liability to themselves, to pay up their calls at once. People cannot be expected in such times as these to advance money for mines, and, therefore, one or two things must happen—the mines which are worth carrying on must stop, and find their way into the winding-up court, and heavy losses be thereby incurred, or shareholders, instead of remaining in arrears of calls, must pay up promptly, and any shareholder in a mine who refuses to bear his proportion in these times will have no right to complain if he is applied to for and made to pay the pressing claims of creditors. Committee men and secretaries are always anxious to keep minutes of calls, and to protect their shareholders as much as they can, but to do this now involves the extra duty, through legal means if necessary, of enforcing the immediate payment of calls and arrears of calls.

**MINES PURCHASE AND FINANCE COMPANY (Limited).**—The purchase of the property originally referred to has been made, and new leases, &c., are nearly complete. A prospectus has also been got ready for a new company, which will buy the newly acquired property of the Mines Purchase and Finance Company, and work it—we believe to a very large profit—almost without risk. Just at the moment, however, when the financial and commercial world is in such an agitated condition, we think it best not to launch the new company. In a few weeks the financial storm will have cleared the air, and we shall have better times, than ever for small *bona fide* concerns. In the meantime, the shareholders may rest satisfied that a property has been obtained that bids fair on a moderate calculation to pay the company 50 per cent. This will not be such a great affair as Foreign Lands and Chontales, but it is a good beginning, as the company on settling this affair will be upon the look out for others of the same kind.

"X. X. X."—We have no doubt whatever that great numbers of persons left mining to go into financial companies, the liabilities of which are fearful; and many a man who grumbled at a loss of 50%. In a mine may find himself minus twenty times the amount in something much worse. Of late years we must also admit that mining companies have been very unfortunate, though the liabilities of none have been of any amount. Of all the young schemes put up, we saw one or two that were really worth something, but they were all drawn from all this is that the stoppage of most of them will stay the heavy drain upon the shareholders for calls, and enable those mines that go on to get a better price for their produce. We believe, also, that mining will benefit materially by the collapse in financial companies, and that very shortly good mines will have a great rise. We shall then be able, upon the principle of a division of risk ensuring success in the aggregate, to give a list of mines in which the purchaser may almost to a certainty calculate upon a great profit. In the meantime, we advise everyone to buy Prince of Wales shares. In ordinary times the shares would have been many points in price as they are now shillings, for no such discovery has been made in Cornwall for many years.

**TIN BOUNDS.**—I wish to call attention to a remark by the Lord Chancellor in a recent appeal case in reference to a water course—*Imvay v. Stocker*. His Lordship said—"The right to bounds was a very anomalous one; it was merely a chattel, and they lost all interest when they ceased to work." In respect to the opinion above expressed, or to any remarks made by the Vice-Chancellor at the previous trial, the best course to pursue is to consult the Statutory Law on the point, which affirms the right to bounds to be held by annual renewal, whether they continue in working or not, and this, in connection with the possession by the claimant of the necessary legal documents, establishes the right. See "Laws of the Statutes," page 55—"We do agree our custom to be, and accordingly constitute and ordain that rights and titles to bounds, rights and titles to advowsons, to work times, shall be in the nature of chattels, and shall be perpetually enjoyed from executor to executor or administrator, being renewed and continued according to custom, and shall be executors' assets, subject to the payments of debts and legacies, in such order and manner as other goods and chattels are by the rule of the common law, but may be granted by deed or devised by will." The legality of the bounds cannot be justly questioned. Mr. Basset, in his "Origin and History of the Bounding Custom," says—"The custom appears to be so inveterate, and the belief in it so strong, so long, so extensively acted on, that it is impolitic and unjust to dispute the claims founded on it." Mr. Basset was one of a commission in 1857, with Messrs. Davies, Gilbert, and Barlow, chosen to investigate the bound property, and with every facility at hand they came to the above conclusion. There is a disposition at present to ignore the bound right altogether, and instances might be quoted where claimants have been referred for payment to the landowner, with whom they have nothing to do. From the tenor of the Statutory Law, an annual renewal is necessary, in order to identify the limits and to maintain the right, whether the mines under bounds are in operation or not. Large sums have been invested in this property under the shelter of the Statutory Law, and mines which have for years ceased working have, under a new advent, recognised bounds on the right being passed by renewal and deed. There are friends of mine who own large sums for bound dues, and when application has been made they have been referred to the lords of the soil for payment; and, being remonstrated with on the illegality of this, they have been told to bring the matter before the Vice-Warden, which they have not the means of doing; therefore, they are obliged to suffer a great injustice—WILLIAM HEWITT, Fowey: West Briton.

**GUN-COTTON.**—A few years ago the Austrian Government appointed Col. Lenk, one of the artillery officers, to carry on a course of experiments on gun-cotton, with a view to ascertain its applicability to military purposes. The results were so satisfactory that the gunpowder makers, foreseeing risk to their trade, contrived that the magazine of cotton should blow up, and so put an end to the experiments. Our own Government then took up the question; a committee was appointed to investigate it, with the President of the Royal Society as chairman; Col. Lenk, sanctioned by the authorities of Vienna, came to England to communicate information; the committee worked so successfully that, as General Sabine stated in his last anniversary address to the Royal Society, they demonstrated that for small arms gun-cotton is greatly to be preferred to gunpowder; and the gun-cotton manufactory at Stowmarket became busier than ever. It now appears that, with war in prospect, the Austrian Government have recalled Col. Lenk, and ordered him to prepare an enormous quantity of gun-cotton. He sent a large order to Stowmarket, but was answered that it would take six months to execute; consequently, a manufactory must be immediately set on foot near Vienna, notwithstanding the opposition of the gunpowder makers. There can be no doubt that with gun-cotton ammunition troops would have a great advantage over those supplied with ordinary cartridges; and it may be for this reason that the Italian Government are, as we hear, making large preparations of gun-cotton. Besides its suitability for small arms, the cotton is said to be particularly serviceable for mining purposes and explosions under water.

## WHEAL THOMAS—PROSPECTUS.

This Mine is situated in the parish of PERRANZABULO, in the county of CORNWALL, in light blue kyllas strata, favourable for driving, and highly mineralised. This mine is also situated in a splendid locality for mining and mineral, being bounded on the north by the Great Retallack, and on the south by Wheal Hope, both of which have been abundantly productive, the former for blende and the latter for silver-lead, and there is every probability of similar and far greater results in this mine than the two former, as may be seen by a sketch or plan of the lodes. This piece of ground is also situated in a splendid mining district, being about two miles north-west of the far-famed East Wheal Rose, one from North Shepherd, and a half from the Old Shepherd Mines, where their returns were from 300 to 300 tons of silver-lead per month; about two miles from Penhale and Lomax Mines, and about two miles north of West Chiverton Mine, which at present is yielding to the adventurers large dividends. This set some years since was taken up by a company of poor men, who induced the late Capt. John Middleton, of East Wheal Rose, to take an interest. He, knowing the locality and run of the lodes, commenced at once to drive an adit level to intersect the lodes in the eastern part of the sett, which he, as well as other practical miners, formed a very favourable opinion of; but some of the party being very poor, and Capt. Middleton having had a deal of trouble to get their money, at once determined (after driving about 120 fms.) to abandon the mine, rather than take any further trouble with them, leaving about 80 or 90 fms. further to drive to intersect the lodes.

There are two east and west and two north and south lodes, and, when intersected, there is every probability of their being abundantly productive, which is a general opinion of experienced miners.

The junction of these lodes at the adit level will give a back of about 12 fms. There is also a large elvan traversing the entire length of the sett, and crossing the north and south lodes about 30 fms. north of the first east and west one, which lode will intersect the two former lodes in a splendid valley, where large deposits of silver-lead may be expected.

At the 17 m. level (in the old mine), west of Ball's shaft, an end is being driven west about 40 fms., and cut a north and south lode, which lode has been driven on south for about 50 fms., leaving about 30 fms. further to drive to cut Budnick lode, and this lode stands whole throughout the entire length of the sett, being about 390 fms.

Looking at the locality and situation of this mine, and kyllas in which these lodes exist, a more favourable piece of ground cannot be offered to the public for investment, and to which the attention of mining investors and speculators is most particularly solicited, as the sett can be had on most reasonable terms.

Apply to HERRIAR PRATER, Hendra Cottage, Perranrorth, Truro, Cornwall.

## THE MONTPELLIER MINING COMPANY (LIMITED).

Incorporated under the Joint-stock Companies Act.  
Capital £40,000, in 10,000 shares of £4 each. First issue, 5000 shares.  
Deposit 10s. per share on application, and £1 on allotment. Calls not to exceed £1 per share, and at intervals of not less than three months.

**DIRECTORS.**  
ALFRED W. ADAMS, Esq., Acting Attorney-General, Douglas, Isle of Man.  
RICHARD SHERWOOD, Esq., Advocate, Douglas, Isle of Man.  
THOMAS PALMER, Esq., 21, Cannon-street, Manchester.  
JOHN MAQUIRE, Esq., 41, Hanging Ditch, Manchester.  
EZEKIEL TURNBULL, Esq., Harpurhey, Manchester.  
JOHN JOUGHEIN, Jan., Esq., Peel, Isle of Man.  
THOMAS COTTIER, Esq., Peel, Isle of Man.

(With power to add to their number.)  
**BANKERS**—Union Bank of Manchester (Limited).  
Messrs. Dumbell, Son, and Howard, Douglas, Isle of Man.

**SOLICITORS**—Messrs. Slater and Barling, 4, Norfolk-street, Manchester.  
**SECRETARY**—Mr. Joseph Taylor.

**OFFICES**—17, CROSS STREET, MANCHESTER.

**ABRIDGED PROSPECTUS.**  
This company has been formed for the purpose of acquiring a very extensive and most valuable mineral property, called the Montpellier Mines, situated in the parish of Balaugh, in the Isle of Man, which the directors have made arrangements to purchase, together with the whole of the materials, from the present proprietors, who now hold the grant from the Crown, and who, as a confirmation of their confidence in the success of the undertaking, and of the mines being speedily brought into a dividend-paying state, have taken the large sum of £4000 in *bona fide* shares of the company.

The present operations consist of an adit level, which is being driven on a large and powerful lode, running 40° west of north; this level commences at the bottom of Montpellier Glen, on the western base of Snaefell, and is being driven on to intersect a very fine and powerful north and south lode, which crosses a little higher up the glen, where, at the junction of these lodes, on the surface, considerable quantities of silver-lead ore have already been extracted, and at this part of the mine large deposits of ore are confidently expected, as has been sufficiently proved by the result of shallow explorations on the surface.

To effect the intersection of the junction of these lodes, it is intended to sink a shaft, and to drive forward the adit level as quickly as possible, by which means the mine will be drained to the depth of 100 fms. without the aid of pumping machinery.

The property is situated in one of the finest mineral districts of the island, being only a short distance from the Snaefell and Great Laxey Mines, and the strata being of the same geological formation, there is every facility in the sett for carrying on the most extensive mining operations, and the large river of Sulby, which runs through the property, affords an ample supply of water for every purpose required, at all seasons of the year. In submitting this undertaking to the public, the directors feel confident that there are few mines which hold out greater prospects of success, and have great pleasure in referring to the very satisfactory reports of the two able and experienced mining engineers, Capt. Edward Bawden, of the Foxdale Mines, and Capt. John Killo, late of the Great Laxey Mine, copies of which may be had, together with the full prospectus and every other information, on application to the Secretary, at the company's offices, 17, Cross-street, Manchester; or to Mr. THOMAS COOPER, Strand-street, Douglas, Isle of Man.

## THE DOROTHEA WEST, GREEN, BLUE, AND RED SLATE COMPANY (LIMITED).

Registered under the Companies Act, 1862, whereby the liability of each shareholder is limited to the amount of his shares.  
Capital £50,000, in 10,000 shares of £5 each.  
Deposit, £1 per share on application, and £1 10s. on allotment.

**DIRECTORS.**  
THOMAS WATERS BRITAIN, Esq., Dagenham, Essex (Director of the Princess of Wales Slate Company, Limited).  
Col. HUGH CALVELEY COTTON, Angley, Gosport, Hampshire.  
Lieut.-Col. H. GARNET MAN, Halstead Lodge, Sevenoaks, Kent (Chairman of the Prince of Wales Slate Company, Limited).  
JAMES MAW, Esq., Stratford, Essex (Director of the Llanfair Green and Blue Slate Company, Limited).  
WM. WALTER, Esq., Heregrave, Rainham, Kent.

**BANKERS**—The National Bank, Old Broad-street, E.C.  
AUDITOR—F. BURNARD SMITH, Esq.

**GENERAL MANAGER**—Mr. Thomas Harvey.

**OFFICES**—38, KING STREET, CHEAPSIDE, E.C.

This company is being formed for the purpose of purchasing and extending the workings of an established and valuable quarry in Carnarvonshire, known as the Dorothea West, lying on the hill side of Nantlle Vale, and embracing and intersecting nearly all the valuable veins of slate in that district, including the celebrated Dorothea veins.

The company have agreed to purchase the quarries, which are in full work, and raising a large monthly profit, together with the plant and machinery, for the sum of £20,000, one-half of which is to be paid in cash, and the remainder in paid-up shares. This amount is far less than the capital expended in developing the quarries, and bringing them into their present profitable condition; but the original proprietors have stipulated for retaining a large interest in the company.

There are seven veins of slate in the property, of fine colour, split, and quality, the slates from which can be seen on the quay at Carnarvon, from whence they are shipped or sent off by rail to all parts. The new Charing Cross Railway Hotel, the London Bridge Hotel, and the Star and Garter Hotel, Richmond, are covered with green slates from this quarry.

The green slate from the Dorothea West has been long known as the finest in colour and quality, as well as the largest vein of green slate in Carnarvonshire. Green Dorothea are now worth £10 per thousand, or £2 6s. 8d. per ton, and other sizes bear a proportionate price, being all about double the price of the best blue, and exceeding the average price per ton of all the copper ore of Cornwall.

Full prospectuses, with reports and forms of application for shares, can be had at the company's offices, together with an account of the working and profit for the month of March, 1866.

## BARROW HEMATITE STEEL COMPANY (LIMITED).

HEAD OFFICE AND WORKS,  
BARROW-IN-FURNESS, LANCASHIRE.

BRANCH OFFICES,  
No. 2, GREAT GEORGE STREET, WESTMINSTER.  
No. 73, ST. VINCENT STREET, GLASGOW.  
No. 44, QUEEN STREET, WOLVERHAMPTON.

**DIRECTORS.**  
His Grace the DUKE OF DEVONSHIRE.—CHAIRMAN.

LORD FREDERICK CHARLES CAVENTISH, M.P.

HENRY WILLIAM SCHNEIDER, Esq., M.P.

WILLIAM CURREY, Esq.

FREDERICK NICHOLL, Esq.

JAMES RAMSDEN, Esq.—MANAGING DIRECTOR.

SECRETARY—Francis T. Rolfe, Esq.

MANAGER—J. T. Smith, Esq.

This company was originally formed for the manufacture of steel under the Bessemer process, from the furnaces of Messrs. Schneider, Hannay, and Co.

The company have since arranged for the transfer to them, on the 1st January, 1866 of the Hematite Iron Ore Mines and Furnaces belonging to that firm.

In addition to the supply of iron ore and hematite pig-iron, and the manufacture of steel rails, which was the primary object of the company, they manufacture tyres and axles.

Plates for shipbuilding, boilers, girders, bridges, and roofs.

Bars, angles, galls, and forgings of every description in steel.

## ELLEN UNITED COPPER AND ZINC MINING COMPANY (LIMITED).

Capital £30,000, in 15,000 shares of £2 each. Certificates of five shares each.

10s. per share to be paid on application, and 10s. on allotment.

REGISTERED OFFICE OF THE COMPANY,  
28, PRINCES STREET, MANCHESTER.

8000 shares have already been allotted, and paid upon.

Application for the remaining shares to be made to the secretary, Mr. THOMAS MONTGOMERY, 28, Princess-street, Manchester, or to the following agents—Mr. G. F. DUNCAN, King Edward-street, Maclefield; Mr. BURNHOLME, Radnor, Cornwall; Mr. J. PAUL, Chacewater; and Mr. C. TETTERLY, Exeter, of whom full prospectuses and reports may be had, and every information obtained.

N.B.—At a meeting of the directors and shareholders (numerously attended from Manchester, Maclefield, &c.) held at the mine, on Saturday, 31st March, Thomas, Esq., one of the directors, being present, a silver trowel, the foundation stone was laid for the 70-in. cylinder engine, purchased from Messrs. Derry and Son, St. Austell, to be erected immediately, when a large number of men will be put on tribute, and regular returns made.

An early application for shares is requested, as the directors will shortly close the list.

## Notices to Correspondents.

\* \* \* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

**BEST PAINT TO RESIST STEAM.**—I should feel obliged if any of your correspondents would give the best recipe for mixing paint to resist the softening effects of steam.—H. M. SITHNEY AND CANNREAL.—As a shareholder of this mine, who has regularly paid the calls when demanded, I beg to ask my fellow-shareholders whether they have received, as I have done, a letter of call made March 16, requiring that the said call be "paid forthwith," without stating to whom or where such call is to be paid, merely signed "Frederick Hill, purser." I have written to enquire the same of Mr. Frederick Hill, but have got no answer. I should wish also to know who was in the chair at this last meeting, reported to have been held on March 15.—A SHAREHOLDER.

**NITRO-GLYCERINE.**—I should be glad to have some information on the nitro-glycerine for blasting, where sold, and the price? Also where used, and with what results? Any information and an opinion of its merits will be thankfully received.—Y.: Statop.

**THE INVENTOR OF NITRO-GLYCERINE.**—Referring to the discovery and introduction of nitro-glycerine, Prof. W. Dumas writes that Mr. Nobel is not the inventor of it nor of its applications in industry, for last year a block of steel was presented to the Academy of Sciences, of Paris, split in two by nitro-glycerine, and in 1847 he was present at the experiments of Sobrero, being himself a pupil of Pelouze at the time, and after this savant had demonstrated the explosive nature of this dangerous substance, he depended on us to experiment on it. He could name all the authorities who speak of it, but he will only name one work, published in America. Mr. Daniel Bredt, chemist to the Patent Office in 1853, translated the "Principles of Organic and Physiological Chemistry," by Dr. Carl Larvig. (German edition of 1851.) In the article "Glycerine," he says—"With nitric acid, glycerine becomes a violently exploding nitro-compound."

## THE MINING JOURNAL

## Railway and Commercial Gazette.

LONDON, MAY 19, 1866.

## THE COAL QUESTION.

"This a question," says Mr. W. STANLEY JEVONS, "of that almost religious importance which needs the separate study and determination of every intelligent person. And," he continues, referring to the forebodings of those who suppose our stock of coal to be running short—"And if we find that we must yield before the disposition of material wealth, which is the work of a higher Providence, we need not give way to weak discouragement concerning the future, but should rather learn to take an elevated view of our undoubted duties and opportunities in the present."

Learning that the rate at which the exhaustion of our coal beds is going on is about 95,000 acres, of a yard in thickness, per annum, we can well understand that thinking minds are beginning to feel alarm, and to enquire how long our deposits of fuel will last, with this enormous drain, upon them. The uncertainty which at present surrounds the whole question, naturally tends to increase the apprehension that we may upon some winter's morning, at no very remote period, awake to the annoying fact that the coal-cellars of the United Kingdom are empty.

There are several points in connection with this question upon which we purpose from time to time to write; at present, our only intention is to show the strange uncertainty which surrounds so vital a question. It must be remembered that the evidences of this uncertainty given in the following computations are of the most decided character, all of them having been made by men professing to have special information respecting the coal fields with which they deal.

## FIRST, OF THE NEWCASTLE COAL FIELD.

MAC NAB, in 1792, in a Treatise on the Coal Trade in Williams's Mineral Kingdom, gives the duration of this field as..... 360 years.  
TOWNSEND, in 1814, in Annals of Philosophy..... 1000 years.  
HUGH TAYLOR, in 1850, Report on Coal Trade..... 1727 years.  
DR. BUCKLAND, Bridgewater Treatise..... 400 years.  
G. C. GREENWELL, in the Transactions of Mining Engineers, gave the duration as..... 331 years.  
T. Y. HALL, after a very careful examination of the same field..... 256 years.  
SIR WILLIAM ARMSTRONG says, in his address as President of the British Association,—"So far as this coal field is concerned, at the present rate of working, it is generally admitted that exhaustion will take place in .. 200 years.  
HARDY, in a paper read before the Mining Engineers of South Wales, says, speaking of the Durham and Northumberland coal fields,—"The thin seams alone would supply the present generation for .. 400 years.  
EDWARD HULL, in his Coal Fields of Great Britain, second edition, gives the period as..... 450 years.

## SECONDLY, OF THE SOUTH WALES COAL FIELD.

H. HUSSEY VIVIAN, M.P., in his speech some years since on the French Commercial Treaty, says—"I arrive at the conclusion that South Wales could supply all England for..... 500 years.  
And her own consumption for..... 6000 years.  
EDWARD HULL, in his book already quoted, says—"Supposing the production of future years to amount to ten millions, the supply would last for 1600 years.

## THIRDLY, OF ALL OUR COAL FIELDS.

MCCULLOCH, in his Dictionary of Commerce, says—"Calling her coal mines the coal cellars of the great city, there is in them a supply which at the present rate of expenditure will last for..... 3000 years.  
R. C. TAYLOR, of America, in his book on Coal, estimates the duration of all the British coal beds as..... 1700 years.  
SIR W. ARMSTRONG writes—"The entire quantity of available coal existing in these islands has been calculated to amount to about 80,000,000,000 tons, which at the present rate of consumption would be exhausted in .. 930 years.  
but with a continued yearly increase of 2,500,000 tons would only last .. 212 years.  
EDWARD HULL writes—"The increase, as I have shown, amounts to 1,500,000 tons per annum, or 150,000,000 tons in a century; with the above rate of increase, it (the coal) would only be sufficient for upwards of .. 300 years.

From this it will be evident that no dependence can be placed upon any computation that has yet been made. Mr. H. HUSSEY VIVIAN, who, in 1860, told us that "it was perfectly absurd to talk of the exhaustion of coal in this country" (see speech published by RIDGWAY, 1861, second edition), has given notice that he will move for the appointment of a Royal Commission to enquire into the future prospects and present state of our coal trade. Sir GEORGE GREY has informed the House that the Government are in correspondence with Sir RODERICK MURCHISON on the subject, and that it is probable the enquiry will be committed to the care of the Geological Survey and the Mining Record Office.

Whatever course may be adopted, it is to be hoped that it will be carried forward in perfect independence of all trade interests; that it will be regarded as a religious duty to determine, with all possible exactness, the quantities of coal remaining unworked in the existing collieries; and that the highest geological knowledge and practical experience will be brought to bear on the examination of the country covered by the Permian rocks and the New Red Sandstone, so as to determine what the probable extension of known coal fields may be. We shall return to this subject.

## MINES AND MINING IN CALIFORNIA AND NEVADA.

## NO. III.

Reviewing the whole field of quartz operations, it is evident that this branch of mining in California has not only received a new impulse during the past year, but that its rewards have been steadily on the increase, and the confidence felt in its future is firmly established. The expenses of working the rock have been reduced, whilst the percentage of the gold saved has been increased. The yield has, of course, been very unlike in different localities, often fluctuating much even in the same neighbourhood, the scale of variation frequently running from 1% to 30% to the ton. At Clear Creek, on Kern River, and about Grass Valley, the average yield is at least 6% per ton. A great deal of rock is now worked with a compensating margin that does not yield more than 40s. to the ton, and in some localities it is said to have been worked without loss, though yielding no more than half that amount. In almost all true veins there is an improvement with depth. The Eureka Mine, Amador county, at a depth of more than 1000 ft. is paying as well as at any point above. The shaft of this company is the deepest in the State, and though there are several others of nearly as great depth, yet in none of these cases of extreme depth has there been any visible impoverishment in the ores, so far as reported. At Grass Valley, where many of the ledges have been developed to a considerable extent downwards, the same general facts hold good. The earnings of some of these mills and mines are enormous. The net earnings of the Crescent Company, Plumas county, have been at the rate of 20,000£ per annum, whilst, as we have already seen, many of the leading mines about Grass Valley have produced still more satisfactory results. The total yield of the Allison Ranch Mine, since operations were first commenced upon it, has exceeded 500,000£; the group of claims on Massachusetts Hill have turned out about 700,000£; the North Star, and other mines on New York Hill, have yielded 500,000£; and



the Norambagua alone, 200,000. The complement for Gold Hill has been 600,000, and for the Lone Jack Mine, Ophir, Osborne, and Haeston Hills the aggregate has been fully 700,000. The product of Eureka Mine during the past two years has exceeded 100,000, its earnings for the month of December last alone having been more than \$6000. The aggregate amount of gold taken from the quartz mines within the limits of Grass Valley district since 1852, thirteen years, has been 4,000,000.

While California has within her borders a considerable number of what may properly be termed silver-bearing lodes, she has as yet produced but little of this metal, the bulk of it having come from the mines about Virginia city, and other localities in the State of Nevada, where mining for it is extensively engaged in. The yield of that State for the past year amounted in round numbers to about 3,200,000, the same as the year before, the entire product of that region since the discovery of silver there, in 1859, being estimated at about 8,000,000. While there has been no tangible falling off of late in the yield, it is not to be concealed that the results of the last year have somewhat disappointed the more sanguine friends of that country, many of whom had predicted, and confidently looked for, a large increment of the precious metals. That the mineral wealth of Nevada is really very great is now well established, many of the ledges discovered in the central and southern portions of the State during the last year being conclusive on that point. The ores are rich, accessible, and tolerably abundant, as is shown by the decided success of the mills running upon them, and numerous as are the valuable lodes already discovered, the work of exploration is still being carried on with success. Upon the value of many of the districts it is yet too soon to pronounce an opinion, but in regard to some of them there is not much hazard in saying they contain numerous ledges of fair size and undoubted richness, and that when these remote regions come to be connected with San Francisco by railroad communication, as will likely be the case in a few years, they will rapidly fill with people, and produce their great staple in unexampled abundance. There are now in the State of Nevada nearly 150 mills, with an aggregate capacity of about 2000 stamps, a considerable portion of which have been running, the greater part of the time, during the past year.

The following are the receipts of treasure at the port of San Francisco, through regular channels, during the last three years, including importations from foreign countries, for the years—

	1863.	1864.	1865.
Interior.....	\$3,065,470	\$2,992,083	\$2,234,300
North coast, including British Columbia..	995,205	1,610,496	1,499,356
Mexico, &c.....	431,322	343,005	359,878
Total.....	\$4,491,997	\$4,945,584	\$4,093,534

The receipts from the North show a slight falling off as compared with last year, but a larger amount of treasure has been received by private hands from Idaho, Fraser River, and Cariboo. The aggregate receipts from this source have probably exceeded 2,000,000, and an estimate of an additional 40 per cent. of treasure in the hands of passengers from Portland and Victoria is, we think, probably within the truth.

From the silver region of Nevada, included in the northern mines, the actual receipts of the last year were 3,160,000, against 3,180,000, in 1864, and 2,486,790, in 1863. Nearly all the treasure forwarded from Nevada arrives through public carriers, whose records may be readily consulted; but in order to obtain a close approximation to the production of that State it will be well to add 5 per cent. to the recorded receipts, thus making the total produce 3,378,000, for the year 1865.

From the interior of the State of California the receipts, through Wells, Fargo, and Co., of uncoined gold and silver have amounted to 5,191,550, but at least 20 per cent. must be added to this to cover receipts through private hands, making the total production of California 6,229,860, during the past year.

The foregoing statistics afford information of considerable accuracy relative to the annual production of the precious metals from the Pacific States of North America, but in addition to these California annually furnishes about 17,000 tons of copper ore of a high percentage value, and at least 50,000 flasks of quicksilver.

Coal is raised in large quantities from the Monte Diablo district; borax, of which native specimens were exhibited by Mr. Phillips at the Royal Society's *conferentia*, is abundantly obtained in Lake county; and sulphur is found in almost unlimited quantities.

There can be no doubt that the mineral wealth of the Pacific coast is practically inexhaustible; and it is equally certain that both California and Nevada, not to mention the adjoining territories, afford a magnificent field for mining enterprise. It must not, however, be forgotten that many utterly worthless properties have from time to time been introduced to the public, and it consequently behoves all interested in enterprises at so great a distance, to assure themselves, before parting with their money, of the value of the undertaking, on the authority of some competent, experienced, and thoroughly responsible person, by whom the property should be visited and examined.

#### MINERAL RESOURCES OF COLORADO.

In approaching the separate consideration of the several mineral-producing territories of the north-western portion of the North American continent, our attention is first attracted to the late territory, but now infant State, of Colorado, as well because of its geographical position as because of the great extent and richness of its mineral deposits, its superior climate, and its agricultural and pastoral capacities. The organic Act constituting it a territory was passed in the year 1821, and during the last month it has been received into the "American Union" as a State, under a constitution framed and adopted by its own people, and is now clothed with all the power enjoyed by any other member of the American confederacy. When it recollects that only eight years ago this region of country was only known to Americans by the latitudinal and longitudinal lines that mark its present boundary, and that since that time it has passed through the several transitions of erection into a separate territorial Government, and from that to an independent State Government, the argument found in those facts alone becomes irresistible in its behalf as a field for inviting enterprise, and as one offering the strongest inducements to population for the purposes of permanent settlement, and the establishment there of freehold estates.

It is simply a truism that the present population of this new state was drawn to it by the gold and silver known to exist within its limits; but since their discovery, and the accumulation of population, the existence of coal, iron, copper, and lead has been proved in great quantities and of superior quality. Under a charter granted by the Legislature of the said territory for a railway from its eastern to its western line, a company is now fully organized for its construction, a distance of 420 miles from east to west over the exact air line, from the starting point on the Missouri River to the Pacific coast, which is designed to be a section of the Union Pacific Railway, now in process of building. This line of railway is justly regarded as a work of national interest and of vast importance. In addition to this great work, a company has been organized under charter, for the purpose of working the iron mines at Golden city, 15 miles west of Denver city, the present emporium of the State; and the works necessary for the manufacture of rails for that section of the road are now being erected, and will be in successful operation within the next four months. It is the purpose of this company to be ready to furnish the iron for this entire section of the road as rapidly as required. At the present writing Denver city, and also those towns and cities west of it, and situated in the mines, are connected by telegraph with New York and all of the cities of the Atlantic States; but the time required to reach those points in the West, from the city of New York, is now exactly ten days, and hence the same can be reached from London in an average of 21 days; but with the completion of the railway, or within two years, the time required to reach these mines from New York will be 4½ days, and from London scarcely more than two weeks.

The question naturally arises, what is the cause of this rapid growth, and the inauguration of those larger enterprises in this new and distant country? and the answer is at once ready. It is all the result of, and caused by, the extensive and rich deposits of gold and silver in this country, together with the fine climate, and other favourable surroundings for working the mines. The mineral belt of Colorado is from 30 to 35 miles in width, and runs in a south-western direction from the northern line of the State, and is on the eastern aspect or slope of the first principal range of the Cordillera, known as the Sierra Madre, for its one-third part, but which it crosses in going south-west. About two-thirds of the belt lies on the western slope of this range, as it tends to the south line of the State, in the direction of Arizona.

In the early settlement of this country, in 1858 and 1859, the gulch mining or placer digging, as they are more familiarly termed, were the

only mining operations attempted; nor was it known, indeed, but to a small number of persons, that crevice veins of auriferous and argentiferous quartz existed in the country. Those gulch deposits or placer diggings were not extensive, but many of them were extremely rich. Among them we may mention Gregory Gulch, Russell Gulch, Spring Gulch, Lake Gulch, Nevada Gulch, and Eureka Gulch, as the principal ones in what is now Gilpin county; and Grass Valley Bar, Spanish Bar, Illinois Bar, Grass Valley Hill, and Chicago Bar, in Clear Creek county, and lying on the stream of that name, as the chief points of productiveness up to the year 1862. Further south-west are Georgia Gulch, California Gulch, &c., from which also large amounts of gold have been taken by the same process. In many of these localities this operation has been continued to the present time, with results fairly remunerative to those who work them; but the strength, the true source of wealth of the country, is found in the quartz mines, which are abundant and rich, easily approached, and most favourably situated for development by tunnels or adit levels, the only rational and truly successful method of working such mines.

Since the latter part of the year 1860, stamp-mills of all capacities, from those with 3 stamps to those with 128 stamps, have been erected in the different portions of the State, until they now number several hundred; and though they have not succeeded in saving, on an average, over 20 per cent. of the precious metals contained in the ores treated, yet many of the proprietors have grown rich by their operations, while all have sustained themselves, and have been able to make handsome improvements on their properties. The methods employed, heretofore, for the extraction of the gold and silver have been simply to stamp the ore in the mills to the consistency of sand, and at the same time let water flow into the mill, and from time to time throw quicksilver into the ore chamber of the mill, with the ore and water, and let the whole pass out, through screens or sieves, upon tables covered with copper plates, first amalgamated on the surface with quicksilver, on which is deposited the amalgam formed in the mill, and thrown out in small particles on to the tables.

In this way four-fifths of the gold and silver were washed away with the sand, because the gold and silver, being microscopic, and mingled with the sulphurets of iron, copper, lead, antimony, and often arsenic and phosphorus, all of which (being chemically united) completely envelope the particles of gold, which are infinitesimal, and preclude all action of the quicksilver on them. The silver itself being chemically united with sulphur, the quicksilver could have no effect on it whatever without its reduction to a metallic condition, by some process of decomposition which "stamping" could not effect. The great want of some process or other that would overcome this difficulty was felt at an early day, and many processes for that purpose have been proposed. Several are now in practical operation, which are certainly yielding very much larger returns than those obtained from the crude ore as heretofore treated. Among the inventions of this kind those of Messrs. Bahr and Keith, and also that of Messrs. Crosby and Thompson, are worthy of mention. That known as the "Mason Process" is now being fully introduced into practice, and its results cannot fail to be complete and satisfactory. While these several processes have been devised, and are being applied to the treatment of the ores of Colorado, Nevada, and California, the Welch method of "smelting" has been established in Colorado, and is now working daily, with an average yield from those ores of from 45 to 65 per cent. of 2000 lbs. Though it is conceded that this process as employed is both wasteful and costly, yet those employing it are now buying the ores of miners, delivered at their respective mines, at from 4 to 10½ sterling per ton, and transporting it at their own cost to the furnaces.

The ores of Colorado are in quantity inexhaustible, and average by assay as rich, if not richer, than those of any country in the world; and with the completion of the railways now in progress in this State, and the full introduction of the improvements noticed in a former Journal into its mining operations, the yield of gold and silver annually will be counted by millions of pounds sterling, many times multiplied.

#### THE COPPER TRADE.

Messrs. VIVIAN and YOUNGER, the metal brokers, have just issued a pamphlet, entitled "Remarks on the Position and Prospects of the Copper Trade in England, as affected by the War between Spain and Chili," in which they state that during the past seven months the copper trade has passed through a period unexampled during the present generation, the salient fact being that the result of the war is that English copper is 10½ per cent cheaper than before it commenced. They observe that this state of things is certainly anomalous, and deserving of some special notice. From a general review of the position of copper in the world, and having before them many details which it is impossible to embody in a sketch like the present, they are led to three conclusions:—

- 1.—That the average value of copper should be dependent entirely upon the relation between supply and demand, subject, of course, to minor variations, such as more or less speculation, temporary commercial disturbances, &c.
- 2.—That as more than one-half of the world's supply of copper is obtained from Chili, the production of that country should be looked to as the practical index of the value of the article elsewhere.
- 3.—That, taking all circumstances into consideration, the value of copper is unduly depressed in this country at the present time.

They estimate, upon good authority, that the total production of fine copper in the world is at present 90,000 tons per annum, of which more than 48,000 tons are exported from Chili. It must, they think, be apparent that their estimate of exports from Chili for the year ending Sept. 30 next is not undervalued at 38,000 tons. On this assumption, therefore, there will be a deficient supply of copper from Chili to the extent of 10,000 tons (as compared with the twelve months ending Sept. 30, 1865), and the inference is that unless this deficiency be made up by increased supplies from other parts of the world, or by a remarkable decrease in the consumption of the article, it is fair to anticipate an important improvement in the price of copper during the present year. In the United Kingdom the production reached its maximum in the year 1856, since when a large falling off has occurred, the yield at present being only about half of what it was in that year. The Government Tables for 1865 have not yet been published, but as they know that the mines of Devonshire and Cornwall (which form 3-4ths of the total production of the British Isles) yielded last year 9750 tons of fine copper, against 10500 tons in 1864, they are able pretty accurately to estimate the total production of the United Kingdom for 1865, and they put it down as equal to 1864, say 13,000 tons. The yield of the Cornish and Devon Mines for the first quarter of 1866 is put down, they continue, according to the *Mining Journal*, as 2220 tons, against 2498 tons during the similar corresponding period of 1865, which goes to confirm their opinion as to the steady decline in production. The other European production, though in the aggregate of considerable importance, seems, as far as they can ascertain, to remain about stationary, and may, therefore, be considered to occupy a neutral position with reference to the broad question of supply and demand. The yield from Australia (which is directed exclusively to England and India) has lately averaged about 5000 to 6000 tons of fine copper, and the richest mine there (Barra Barra) has become poor, so that altogether the above rate of supply is with difficulty maintained, the tendency being rather towards a decrease in production. The yield at the Cape of Good Hope, though progressive, is at present much too small to have any bearing on the price of copper. The production in the Lake Superior district was 5300 tons in 1865, and it appears that it reached its maximum during 1861 and 1862. Should prices in America decline to our present level, the production will probably be much reduced from what it was last year. California, next to Chili, seems deservedly to attract most attention, but the late high prices have not been upheld long enough to stimulate mining very much in that quarter. The cost of labour, transport, freight, &c., is so much higher there than in Chili, that only rich mines can be worked, unless prices in Europe and America are high. The export of ores from California was last year about 24,000 tons of very unequal produce, but averaging not over 18 per cent., equal to something under 4500 tons of fine copper. For the present, therefore, at least, its production does not count for much in the position and prospects of copper. Looking, then, to all sources of supply, it would seem that we cannot count on any increased production elsewhere to counterbalance the expected deficiency from Chili.

Taking the world's production, as stated, at 90,000 tons per annum, Great Britain works up about two-thirds of the whole—60,000 tons—of which she exports about 37,000 tons, retaining the remainder for home consumption; the quantity for these two requirements, taken together, having doubled itself during the last ten years. The annual increase of consumption of copper in the world is estimated at 8000 tons, and there is no reason to believe that it will not continue at the same rate. The principal country to which copper is exported from the United Kingdom is India. The exports from the United Kingdom to Egypt and the Levant have been and are usually very considerable, but there was a great falling off last year in consequence of the appearance of the cholera in those quarters. It is fair, therefore, to presume that the demand for India, Egypt, and the Levant will, ere long, set in at the usual rate, whilst there is no reason to expect that the rest of the world will not continue to be as large customers as heretofore. It is very difficult, if not impossible, to procure detailed and progressive information on the head of home consumption, but it is an admitted fact that the consumption of copper in this country is steadily and consistently increasing, although at times a temporary falling off is felt in the demand. This dulness of demand, and indistinctness on the part of manufacturers of copper, brass, and other metals where copper is employed, to replenish their stocks freely, has lasted longer than has been known for many years. This must not, however, be taken to indicate that the average annual consumption is lessened. After reviewing the position of stocks in the various markets, they observe that the conclusion to be formed from a broad view of the stocks in all places is, that although there is an excess of 7000 tons spread over Swansea, Liverpool, Havre, and London, that excess is about neutralized by the absence of stock of any consequence in Chili, and the unusual bareness of consumers' stocks all over the world. With regard to prices, they consider that it would be idle to assert that prices of copper in this country cannot see a lower range than at present exists before a reaction takes place, especially in view of the serious political complications now rife on the Continent (though, during the Russian war, by the way, copper was remarkably high), and the great amount of uneasiness, to say the least of it, felt here in commercial circles generally, but we deduce from a review of the whole circumstances—that the supplies of copper from Chili will probably be deficient to the extent of 14,000 tons in the year ending Sept. 30 next; that this deficiency will certainly not be made up by increased supplies from any other part of the world; that the average consumption of copper in the world is on quite as large a scale as usual, and is steadily increasing; that,

taken as a whole, stocks are not above the average, the excess in some quarters being counterbalanced by the deficiency in others; that the present price of English tough cake copper is 19½ per ton below the average of the last 16 years; and consequently that copper in this country is below its intrinsic value.

#### REPORT FROM SCOTLAND.

GLASGOW, MAY 16.—Our Pig-Iron market has very rapidly declined during the last ten days, but it almost appears as if prices were tending to stiffen, notwithstanding the very high price of money, and the hourly increasing certainty of a European war on a large scale. The speculative purchase and abstraction of warrants seem now to be at an end, and the "bulls" having become pressing sellers, the market steadily declined till Monday, when an upward turn was given to prices, and sales for cash have been rather numerous. The exports, however, of the week, till yesterday, are not near equal to what they were in the corresponding week of 1865, the relative quantities this year being 7697 tons, against 13,795 tons last year. Since the beginning of the year the total exports have been 186,756 tons, and in the corresponding period of 1865 they were 239,214 tons, making a decrease of 52,458 tons on this year to date. The lowest price of the week was 56s. a ton. Five of the six furnaces at Hurford are out of blast, on account of the workmen having demanded an advance of pay. To-day the market took an adverse turn, and after continuing flat all day, closed at 54s. 9d. prompt cash, buyers; sellers, 54s. 10½d.; 55s. 9d. was accepted, fourteen days, but the disposition was to realise promptly. Malleable Iron is unchanged in price, and the demand is not of consequence. Second-class makers will be enabled now to produce with a fair profit, if a demand were to spring up; but as merchants are purchasing cautiously, waiting for a decline, no great impetus has yet been given to this branch of trade. Ironfounding is rather improved, and if the labour market were less troubled business would still further improve. In Coals our export trade is being affected by strikes at home and the threatening aspect of affairs abroad. Owing to the drafting of artisans from workshops and factories throughout Germany, our export of coals has been curtailed to that quarter. In some districts working hours have been reduced to a fifth, the rest of the time being spent in "learning the art of war." Coals are consequently declining in price, and the exports have fallen from 24,165 tons in this week of last year to 16,955 tons for the same week this year. In Ayrshire the miners are still locked out, but the colliers need not think to join in a trial of endurance at this season of the year, with a falling market and war prospects looming in the distance. They should take a hint from the Clackmannan men, who are reported to have commenced work on Monday, after having been deceived by promises of "strike pay," which never came. A further decline in prices is looked for.

The short-time and wages movements are trying both the patience and sagacity of the employers of labour. The adjourned meeting of the conference of the ironmasters and engineers on the Clyde with their workmen closed, after a very detailed statement of the workmen's view of the case had been patiently listened to by the masters, by the resolution on the part of the latter to concede the 57 hours per week from the 1st proximo, the wages being diminished to 57 hours' pay. This being their ultimatum, it could neither be said to be rejected nor accepted by the delegates for the employers, and thus the conference separated. The same day (Monday) the master shipbuilders and engineers formed themselves into an association for "securing a uniform course of action," and "relieving the unreasonable demands made by combinations of the workmen." The Greenock ship engineers on Saturday intimated to their employers that unless the hours of labour were restricted to 57 per week on or before the 28th inst. they would strike on that date. The masters replied that they would conform to the decision of the Glasgow conference, which, it will be seen, concedes the 57 hours, but grants only 57 hours' pay. On Monday the Greenock brassfounders struck work for 2s. advance per week; and the iron moulders have followed their example for a reduction of their working hours from 60 to 57 per week. Two firms have conceded the demand of the iron moulders.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

MAY 17.—The monetary panic has seriously checked the staple trades of South Wales, but not to the extent many supposed it would. There is a great amount of confidence evinced in the soundness of the Iron Trade of the district, and it is a satisfactory fact to note that as yet only one failure has taken place—the Briton Ferry ironworks, the liabilities of which are small, and which was noticed in last week's Journal. Two or three parties, certainly, have been struck rather heavily by the financial blow, but, fortunately, they are in a position to bear it. It may here be stated that in this district several large orders are in hand with which Messrs. Peto, Betts, and Co. are connected; nothing definite, however, is known whether they will be withdrawn or not, but whatever course is adopted, the ironmasters will not be losers. Virtually no business has been done on home account since last week's report, and several orders which were in the market have been withdrawn. Both makers and buyers evince the greatest caution, and they are anxiously waiting the result of the panic before entering into fresh engagements. Fortunately, the ironmasters have been as yet enabled to keep their works fairly going in executing orders in arrears, and it is some pleasure to have to record, in the present discouraging aspect of affairs, that the advices received from America are more cheering, and contracts are coming in more freely. During the past fortnight large exports of rails have been made to New York, Baltimore, and other markets in the United States. Trade with Canada, and the other provinces of British North America, continues steady, with a good enquiry. Business on Eastern account is rather quiet, trade having received a slight check. A few good orders have come to hand from the Russian market, but with most of the other continental markets trade is not so active, in consequence of the present warlike aspect of affairs. Should, however, there be found a peaceful solution of the present difficulties, several good contracts will find their way into the market from Southern Europe. The demand for pigs is easier, makers do not evince any anxiety to accept under present prices, whilst buyers are holding back in the hope that the recent collapse in Scotch pigs will affect quotations to some extent, but there is no probability that the make of this district will be quoted much lower than at present.

In the Tin-Plate Trade there is not much business doing. The enquiry continues quiet, and quotations have receded since the quarterly meeting. It is stated that at New York stocks are heavy. The Steam Coal trade is characterised with continued activity, both on home and foreign account, and the energies of proprietors are taxed to meet the demand with that promptness so much desired by shippers. For home qualities there is a moderate local sale, and the coasting trade is in about the same position as for some time past.

The Bristol and South Wales Wagon Company (Limited) held an extraordinary general meeting on Thursday (Mr. J. Perry in the chair), for the purpose of the directors submitting to the shareholders a proposed agreement with Shackleford, Ford, and Co. (Limited), as the company's principal railway carriage and wagon builders. The Chairman said that in 1863 an attempt was made to get up a new company, and they made terms with them, so as not to have an opposition company. They gave the new company 3000 shares at 11. prem., at a time when the shares were selling at 31. prem., and some twenty gentlemen or more entered into an agreement that they would not assist in forming any other wagon company. It had, however, occurred that Mr. Shackleford took into partnership Mr. Ford, and they wished to transfer their wagon building to a limited liability company, and not to confine themselves to wagon building, but to combine with it the letting of wagons on hire. That brought Mr. Shackleford within the meaning of the agreement. Another agreement was made with Messrs. Shackleford and Ford, by which the directors were obliged to take 30,000 of the work a year, and that work was to produce them—first 10,000, at 7 per cent., and the remaining 20,000, at 8½ per cent. The directors thought that as the new company wanted to set aside the first agreement, and release Mr. Shackleford from his obligations under it, it was right that the shareholders should see whether they were not entitled to something for this release, for Mr. Shackleford had something like 1200l. in his 600 shares for signing that agreement. The result of the negotiations was that the wagon company should receive 9 per cent. upon the whole of the 30,000. The Chairman thought the new agreement would yield a profit of 500l. a-year over the old one. After a long discussion, in which the question of gentlemen sitting on both boards of directors was ventilated with some warmth of feeling, it was unanimously resolved "that the directors of this company be authorised to carry out and complete the agreement with Shackleford, Ford, and Co. (Limited), with the memorandum endorsed thereon, the same to be executed and completed within three weeks from this day; but this resolution is to be on the express understanding that the release of Mr. Shackleford from the terms of the agreement of Aug. 20, 1863, will not be construed to release any of the other parties to that agreement, or to sanction any of the new directors of this company becoming directors of the new company of Shackleford, Ford, and Co. (Limited)."

At the New Pits Colliery, Bedwelly, another explosion of fire-damp took place on Thursday morning. Fortunately the present explosion, unlike the last one, has been attended with the loss of only one life, and injury to two other men. The deceased's name was George Thomas, and his age 24. When last seen alive he was working in a level with three other men, named Thomas, Price, and Jones, and when the gas was fired his companions threw themselves on the ground, and succeeded in crawling out of the dangerous place. The body of the deceased was found near the stall in which he worked, by Richard Winstone, who was one of the principal witnesses in the recent investigation. The inquest was formally opened on the body on Friday, and was adjourned to enable Mr. Lionel Brough, Her Majesty's Government Inspector of Mines, to be present.

The works of the Worcester, Dean Forest, and Monmouth Railway, there is every reason to believe, will be commenced this summer, as the company have purchased the necessary lands between Monmouth and Coleford. It seems doubtful whether the line will be carried further into the Forest than Coleford. Thus a commu-



meation will be effected, by the Monmouth, Usk, and Pontypool line, between the Forest of Dean and South Wales, and between the Forest and Staffordshire and the Midland districts, by means of the Ross and Monmouth and Ross and Tewkesbury lines.

The Ross and Tewkesbury Railway bill has been withdrawn, in consequence of an amalgamation with the promoters of the extension of the Northampton and Banbury line from Bloxley, through Tewkesbury to Ross, and to form a connection with the Ross and Monmouth line. By this means direct communication will be afforded between the mineral districts of South Wales and the Midland Counties.

The Merthyr, Tredegar, and Abergavenny shareholders have only to receive another dividend ere they cease to be any longer a company. They have wisely determined to accept an offer of the London and North-Western Company, to exchange their shares for 5 per cent. perpetual preferential stock in that company. The Merthyr, Tredegar, and Abergavenny line was leased to the London and North-Western some four or five years since, the latter company to pay a rental of 5 per cent. on the ordinary capital, and one-half of the profits. The line was to be converted into a double line, and a part of it was to be doubled, but it was found that if the whole line were doubled the engineer's estimate would be greatly exceeded. The directors of the London and North-Western maintained that they leased the undertaking subject to its being made a double line for the authorised capital, and in order to avoid any difficulty they made the offer referred to above. At a special meeting of the shareholders of the Merthyr, Tredegar, and Abergavenny Company this offer was unanimously accepted. The London and North-Western Company are before Parliament for powers to carry out the arrangement.

The arrivals at Swansea include—The Pathfinder, from Calders, with 474 tons of copper regulus, for H. Bath and Sons. The Robert Bright, from Genoa, with 270 tons of copper ore, 52 tons of lead ore, and 2 tons of iron pyrites, for ditto. The Ann Gambier, from Wallasey, with 600 tons of copper ore, for Richardson and Co. The Darling, from Cagliari, with 410 tons of lead ore, for H. Bath and Sons. The Carmelita, from Tocopilla, with 625 tons of copper ore and 269 tons of copper regulus, for Elford, Williams, and Co. The Henry Grenfell, from Cuba, with 664 tons of copper ore and 4 tons of copper regulus, for the Coburn Mining Company. The Sunbeam, from Havannah, with 253 tons of copper ore, for Richardson and Co. The Atossa, from Pina Blanca, with 710 tons of copper regulus, for H. Bath and Sons. The Burns, from Tongoy, with 516 tons of copper regulus and 180 tons of copper ore, for H. Bath and Sons. The Patagonia, from Cobija, with 430 tons of copper ore, for H. Bath and Sons. The Janmay, from Copiapo, with 312 tons of silver ore and 254 tons of copper regulus, for H. Bath and Sons. The Lint Marry, from San Francisco, with 423 tons of copper ore, 9 tons of copper in pigs, 58 tons of silver ore, 11 casks of mineral ashes, and 135,000 lbs. of quicksilver, to order. The San Giovanni Battista, from Leghorn, with 120 tons of copper ore, for H. Bath and Sons.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

MAY 17.—The Iron Trade is necessarily quieter, and the possibility of extensive undertakings, which depended on advances from banking, discount, and finance companies, being indefinitely postponed, is sure to make buyers pause for a time. The monetary crisis has very slightly touched this county. Prior to 1857, a good deal of South Staffordshire paper, including some very bad, found it way to Overend and Gurney's, but this has not been so extensively the case of late.

In the case of the failure of Messrs. Gibbs Brothers, ironworkers, their statement shows liabilities—exclusive of endorsements, which are not expected to involve any claims against the estate—of £35,000, and the assets show £11,440. In 17. The bad debts are under 20000. The proposal they made to their creditors, at a meeting on Monday, was to pay 11s. in 11. in six months. The offer was accepted.

Messrs. Hartshorne and Ward, chain manufacturers, of Queen's Cross, Dudley, have suspended payment, with liabilities amounting to about 20,000.

A correspondent of the *Mining Journal* from Derbyshire, Yorkshire, and Lancashire appears disposed to treat rather lightly the predictions of the rapid consumption of the stores of workable coal in England. Dwellers in South Staffordshire are too sensitive of the possibility of exhausting vast beds of coal, as the great Ten-Yard seam exists now to only a small extent, and others are being rapidly worked out. It is true, as has been often stated in this letter, that there are sanguine hopes of getting coal from beneath the Permian strata, which would immensely widen the area; but the cost of extraction would be greatly increased, and it is one of our advantages as a nation in having minerals easy of access that our power to undersell many others depends. The warnings of Mr. Jevons, Sir Wm. Armstrong, and many others, will do good, for they are, as your correspondent's letter shows, urging attention to the economical consumption of smoke. It is a monstrous thing that the fair face of heaven should be blotted out over wide and populous districts by the escape of valuable unused fuel into the air.

On the 1st instant two miners were killed at Herbert's Park Colliery, at Darlaston, by the fall of roof. At the inquest, on Wednesday, Mr. Baker, the Mines Inspector, was present. Joseph Clarke, the doggy, and John Wood, the deputy doggy of the pit where the accident occurred, were the only two witnesses examined. Their evidence was to the effect that on the day before deceased (Rhodes and Colley) were killed, they noticed a slip in the roof of the pit where those persons were working, and having had a couple of trees put in, they considered that they had taken ample precaution for the safety of the workmen, and would have no hesitation to work in that part of the pit themselves. The doggy, however, told Colley to put up another tree if he should see any necessity for so doing, meaning, as he explained, that this was to be done when coal had been removed to make room for an additional tree. On the following morning, when he made the usual examination, he saw no signs of danger, but about two hours later, when, as there was every reason to believe, Colley was in the act of putting in another tree, a mass of rock, some 9 ft. in length, and about 8 ft. in thickness, fell upon him and his companion, and killed them on the spot. There was abundance of timber in the pit, and both witnesses admitted that had more trees been put in the accident would not have happened.—Mr. Baker stated that he had made an examination of the pit, and was of opinion that the accident was wholly due to a less number of trees having been used at this part than should have been put in, looking at the extremely dangerous condition of the roof. The jury returned a verdict of "Accidental Death," but censured the doggy for not having insisted on more timber being put up, considering the dangerous state of the roof. This case involves, as did one referred to last week, the important question whether the person in charge of the working of a mine is responsible or not for proper timbering being carried out. On the determination of this question the diminution of the loss of life in mines in South Staffordshire mainly depends. If every individual workman is to judge of the necessity of timbering, there is little hope of reducing the loss of life from falls of roof, a sad source of fatality in South Staffordshire.

#### DERBYSHIRE, YORKSHIRE, AND LANCASHIRE.

MAY 17.—The panic of the past week has passed over without much interruption to trade, although in the northern part of Yorkshire, where the firm of Overend, Gurney, and Co. has been held in the highest repute, there has been much and sad disappointment. The demand for iron continues active, and in North Derbyshire trade was scarcely ever in a better condition. Pipes and rails are in good demand, and manufacturers generally have no reason for complaint, as orders are coming freely to hand, both for home consumption and for exportation. The Chesterfield and Midland Silkstone Coal Company, whose property was some time since handed over to the mortgagees, who had a first claim for 11,000, is about to be resuscitated, and a company is being formed for the purpose of working the colliery. A preference, it is said, will be given to the old shareholders, should they be desirous to avail themselves of it. There is a large tonnage of coal being sent by the Midland from Staveley and Clay Cross, and, considering the season, the trade was scarcely ever in a healthier state, the orders in hand for the southern markets being more than an average. In many branches of the Sheffield trade business is remarkably quiet, but steel manufacturers and makers of armour-plates are kept fully going. In the South Yorkshire district there is no alteration whatever in the state of trade, Parkgate, with its 1400 men, being well supplied with orders, whilst at Elsecar matters remain in a very unsatisfactory state, only a very few puddlers being engaged, with no disposition shown to increase the number. The Coal Trade in the same locality continues brisk, more especially for what is known as Barnsley "hard," for which there is just now a large demand for the various works in Yorkshire and Lincolnshire. For small coal and slack, which a few years since were looked upon as waste, there is now a large demand for stationary engines, and for the making of coke. Only a short time since, at nearly all collieries, the small coal was used for road-making, and other purposes where stone was considered too expensive, but now it has become a most important item, and commands a high price at home and abroad. On the Lincolnshire side of the Trent new furnaces are being put into blast, and in the course of some three or four weeks all the furnaces there will be in full blast, and the locality promises to be one of the most thriving in England.

It is reported that upon Lady Downe's estate at Birdforth, three miles west of Coxwold, the engineer has met with a thin seam of very good coal, with indications of a thicker and much more valuable seam below. A shaft is to be sunk.

In the North Riding of Yorkshire the failure of the past week has been slightly felt, and the market for pig-iron is anything but firm. On Wednesday, at Middleham, the prices were for sellers, 50s. 3d., and buyers, 49s. 9d.

In Liverpool, where the news from London on Friday last was received with consternation, things have been well adjusted, and the panic has passed over comparatively harmless, although for some little time it cannot do otherwise than to some extent cause trade to be very quiet. In the iron manufacturing districts of Lancashire trade continues brisk, and the late failures seem to have in no way interfered with the ordinary course of trade.

The question of our coal supply still occupies public attention, and I hope to be able to bring forward, in next week's *Mining Journal*, some valuable information on the subject, under the auspices of some of the most eminent mining engineers of the county, to whose opinion most people will be inclined to defer.

The Devonshire Silkstone Company have commenced to send their coal to market. It finds an exit from the pit's mouth by a short line on the Sheepsbridge Company's branch, which communicates with the main line of the Midland at a point known as the Danstan and Barlow siding. The mineral is transmitted from the colliery to the Midland in the company's forest wagons, the locomotive power being supplied by the Sheepsbridge Company. The Tipton Coal and Iron Company are pushing forward their pumping operations to clear the Lockeford Colliery of water; but though they are progressing satisfactorily they will not free the mine from water near so early as was anticipated. The Morton Colliery, at Morton, belonging to the Clay Cross Company, will be in full work shortly. Mr. Brown, who was an underground manager at Clay Cross, has been transferred to Morton, and Mr. George Howe, son of Mr. W. Howe,

engineer to the Clay Cross Company, has been appointed to one of the collieries at Clay Cross. Mr. George Howe has been at Morton since the commencement of the work. On Monday evening a complimentary dinner was given to Mr. Brown and Mr. Howe, when Mr. Binns, the manager of the works, spoke highly of their individual merits. The Morton Colliery will, during the summer, turn out a large lot of coal, and, having railway communication from the pit's mouth to the Midland system, via the Erewash, there is an excellent exit for coal to all parts of the kingdom.

It is anticipated that the directors of the Mill Dam Mining Company will pay a dividend shortly. The other lead mines do not present any new features worthy of note.

#### REPORT FROM NORTHUMBERLAND AND DURHAM.

MAY 17.—The thunder which shook the great London commercial world has not yet done much harm here, nor is it expected to be seriously felt; the operations carried on here are, generally speaking, sound, and the demand for most of the staple articles produced very good, but there are some exceptions to this. In the glass trade some of the large houses have accumulated such large stocks as to induce them to discharge some of their workmen, and reduce the make considerably. All the large iron-works and shipbuilding concerns, &c., are prospering, both private and public concerns on the "limited" principle; most of the concerns are selling at a premium, and all are expected to improve and advance. The prospectus of a new shipping company for Sunderland has been issued, and a most influential and respectable list of directors is attached, so that the success of the undertaking is pretty certain. The object is to run a fleet of steamers for the conveyance of passengers and commerce to and from the continental ports, and it is intended to purchase two or three steamers, which are to be run to Hamburg, in the first instance; communication to be formed with other ports when the company is fully established.

Several steamers have been launched on the Tyne this week—one of 8000 tons burthen, from the works at Jarrow; and also one of upwards of 1000 tons, from the yard of Leslie and Co., at Hebburn. Both vessels are for the foreign trade.

The Gateshead Industrial and Amateur Exhibition was opened yesterday, and contains many objects of interest connected with the mining and manufacturing interest, some notice of which shall be given in this letter next week.

The Coal-Cutting Machine continues to work well at the Netherthorpe Colliery, and three more are ordered for that place alone, and others for other works, so that at length this celebrated machine is to have extensive trials in the hard coals of Northumberland. It is obvious that the employment of several of them at one concern will most materially reduce the cost of working as compared with the cost of working only one machine, as the engine and apparatus required for supplying one mine with water-power can be used for supplying several others; so that if one can be worked to advantage, the working of several will most materially increase the profits.

Mr. James Bird, overman at Plashetts Colliery, has been presented by the workmen with a splendid Albert chain and appendages, together with a ring for Mrs. Bird, as a mark of respect and esteem upon their leaving the place.

The Hartlepool Rolling Mill Company's works are closed for the purpose of taking stock, the company having completed arrangements for a lease to some eminent London and Stockton firms. The stoppage is expected to be of short duration, and the business to be done will be on a very increased scale. One of the firms included in the lease is a large iron contractor for Her Majesty's Government dockyards, and one accepted contract is the manufacture of 100,000 tons of iron-plates for ships. The works are expected to be enlarged three times their present size, in order to carry on the different branches of the business the new leases purpose launching into, and a corresponding number of extra hands will be employed.

#### SELECT COMMITTEE ON MINES.

JOHN NORMANSELL (of Barnsley), in continuation, stated that there is a great objection to the men descending and ascending in the upcast shaft. The smoke and the heat are so great that it is very dangerous, and the danger is added to by increasing the rapidly with which the men descend; there is a tendency to get them through the smoke and heat as soon as possible. As to ventilation, he suggested that the words "under ordinary circumstances" should be left out in the first general rule, so that an adequate amount of ventilation should be at all times provided. As to a better system of inspection, he did not personally complain of Mr. Morton, but there were a great many miners who did. It is reported that men who have been 17 years at collieries have never seen him at all; he did not think it was possible for him to go without being seen. He did not suggest that the Inspector should have anything to do with the direction of the system of ventilation, and the general management of the works, but he suggested that alterations should be taken notice of by employers. The Act states, in many instances, what should be done; but they wanted an Inspector to go and enforce it. The masters did not particularly like explosions, but places are kept with insufficient air to save expense; it is a risk, they do not think anything will happen, but it does happen sometimes. He believed increased inspection would prevent that. By Inspectors coming to see the law carried out employers would be prompted to keep the regulations in force. He thought it would be an improvement if the Inspector were obliged to ask the men if they had complaints, or if there were a book kept to enter grounds of complaint. He would have three or four Inspectors to the 34 collieries in the South Yorkshire (Barnsley) district, giving an average of nine to each Inspector. He had found the workmen reckless in putting up the props, some wanted a great deal more attending to than others. He considered that the contract rules were, in some cases, an evasion of the general rules. In South Yorkshire a great many of the miners were respectable and well conducted, and their habits are provident and prudent; many of the workmen have two or three houses each, for which they rent the land, and their houses are as well furnished and comfortable as there are plenty of places, and many a cote, with a good fat pig in it, besides. On the whole, they are a thriving population, but every district was not so good as South Yorkshire. The weekly pay now established has led to the decrease of playing, the men now working as many days as they can. There is no truck in South Yorkshire. The men's greatest objection is to fines and clabs, especially to clabs—accident clabs. They have their own clabs, managed by themselves. In this way they have paid 5s. per week for accident instead of 5s., and saved 50l. the first year—the contributions being the same as when managed by the masters.

THOMAS MOTHERSHAW, 27 years a miner, in the Wakefield and Methley district, stated that the Act was complied with, with few exceptions. The doors are generally sliding doors, and in good order, but he thought they were better without doors. He thought it would be practicable, and most beneficial to do without doors. Ventilation was carried on without doors—without doors for men and boys to pass through, at Messrs. Charlesworth's, and at Messrs. Pope and Pearson's.

WILLIAM MILLWOOD, collier, of Tipton, Staffordshire, had worked in the collieries of the Earl of Dudley and Messrs. Amphlett and Dixon; and in his earlier days had worked in Shropshire. He was now at Congreave, where he had worked five years. It was a large colliery, and in it there were 8 or 10 boys to every 100 men, and of those not more than three or four were under 12 years of age. Certificates were not required. They were employed in carrying out slack, which was very hard work, and in opening doors. The larger boys drove the donkeys. There were a few women employed on the pit bank, but there was a strong feeling against that. One, named Mrs. Brighton, who lived two doors from him, and went to work at the pit, left two little children crying and pining at home. She was the wife of a man employed at the furnace under Mr. Creswell. There were widows and single women, who had no children to take care of, who worked. His opinion was that boys between 12 and 14 ought not to be employed more than eight hours. They had no complaints to make as to timber, which was supplied free of charge, but would like more frequent inspections. He had never seen the Inspector at Congreave Pit. He had heard of his going down in other pits when there had been an accident.

BENJAMIN OWEN, of Bilston, was an ironstone miner of 21 years' experience. There were about 20 boys to every 100 men. There were general complaints of the ventilation, and that there were not proper air-ways. His father was killed by the black-damp, but accidents were rare. There ought to be better inspection, and when accidents did occur some of the jurors ought to be working miners.

GEORGE PARKER, of Low Spennyngmore, six miles west of Durham, had been a coal miner 19 years, and had never been out of the county till he came to give evidence. He had worked in the Whitworth Colliery of Johnson, Wragg, and Co. 13 years. It was 82 fms. deep. In the district, which comprised 26 collieries, there were about 600 boys under 14 years of age—20 or 30 to every 100 men. They can generally read, and certificates are required if they cannot. There are no grounds of complaint as to timber, which was supplied free of charge. Some are employed to help the putter and pushing the tubs was heavy work. These and the pony drivers are mostly very tried, but the boys generally are "easily wrought." They worked 12 hours on the average, not including Saturday, which is generally a short day. Some of the boys have to travel two miles from the bottom of the shaft before they get to the place where their day's work commences. I think that no boys ought to be employed in the pits under 14, and that for some years their labour ought to be limited to eight hours.

Mr. FOSTER: In that case would the men be able to work more than eight hours?—The men do not feel disposed to work eight hours. I am not aware of any who work more, and some work less. There are two shifts of men. The first shift of men go down at half-past two, and the boys at half-past five. There is only one shift of boys—they work the whole 12 hours, and go through two shifts of men. They come out at the same time as the second shift of men. There are no women employed in the county of Durham pits that I know of.

Mr. LIDDELL: Supposing, as you suggest, the boys were only to work eight hours, would not that create a necessity for a greater number of boys?—Undoubtedly it would.

Mr. LIDDELL: You propose that there should be two shifts of boys, to correspond with those of the men?—Yes, that is what I want.

Sir P. DE GREY EGERTON: Who are the parents of the boys now employed?—Nearly all the boys belong to the colliers.

Mr. HURLEY VIVIAN: Suppose there is another shift of boys, where are they to come from?—I do not know; that is a matter of indifference to me; what I want is the benefit of the boys themselves. I have nothing to do with where the new boys are to come from.

Sir P. DE GREY EGERTON: Are not some of your main doors in some collieries self-acting?—Yes; but near those main doors there is always a frame door, at which a boy sits; it is indispensable for safety that someone should be there to see them closed properly. The fewer the main doors the better. The bulk of the boys are employed in other work. The difficulty could not be met by any mechanical contrivance to get rid of the door-boys. I am not prepared to suggest any system by which the difficulty may be met.

Mr. LIDDELL: If the boys work only eight hours would you expect them to have the same wages?—They could not well have less—1s. to 1s. 3d. per day, and to find their own candles.

Mr. LIDDELL: If this reduction of hours resulted in a less amount of coal being raised would not that raise the price to the consumer?—Certainly; but that is no business of ours, all we want is to benefit the boys now employed—we do not wish to impede the working of the mine in any shape. Mr. CURRY: But do you not think you are bound to consider this difficulty? You recommend a course from which certain consequences would follow, and it is right, when asked as to those consequences, to answer that you know nothing about it? Suppose the price of coal to be raised, should you consider that of no importance?—I do not say it is of no importance—I only say I am not able to answer the question. If they worked only eight hours, I believe most of the boys would go to the night school.

The WITNESSES, then, in answer to the CHAIRMAN, said that the ventilation was not

satisfactory throughout the district. There were not many cases of explosion, but there was a great deal of bad air, which was most injurious to the health of the miners. The system was two shafts and two furnaces, but the airways through the waste were not kept sufficiently open. In his own colliery the ventilation was pretty good. Mr. ATKINSON, the Inspector was "well liked" by the colliers, but it was too much for one man to look after 160 collieries. He was not often applied to by the men, as they are afraid to write. Witness had written twice to him, and he came on each occasion. Witness had not suffered by thus taking upon himself to complain to the Inspector; but his colliery was an exception to the others. The colliers knew of the first rule laid down by the Act 23 and 24 Vic., cap. 131.—An adequate amount of ventilation shall be constantly produced in all collieries, so that the working places shall, under ordinary circumstances, be in a fit state for working; but they did not know what was meant by "ordinary circumstances." They thought that all places where men have to work ought to be so well ventilated as to prevent the possibility of explosion or injury to the men. They believed that this could be done if the masters would go to the expense. Where there was a deficiency of ventilation the Inspector ought to have power to stop the works until that deficiency was removed. In the Whitworth Mine, at about 600 yards from the main shaft, there was another shaft 15½ fathoms deep. That had been sunk on account of a "trouble" in the seam—it was a single shaft, bratticed.

A conversation here arose amongst the committee whether that was not a breach of the Act, in which Sir Philip Egerton said these places were called sumps or winzes, and not shafts, which was something that came up to the air; and it seemed to be the general impression that an oversight had been committed in the Act of Parliament, in not providing that there should be two shafts in such cases.

Witness: The name it has with us in Durham is a "staffle." We want the Inspector to come to each colliery once or twice in three months. I do not think that would in any way lessen the responsibility of the masters. There are no stoppages from the wages to provide for men who suffer from accidents, but in nearly all the collieries in the district it is the rule that if a man is laid off work on account of being hurt by an accident he receives 5s. per week, and a boy 2s. 6d. We contribute nothing for this; it is the gift of the masters. There are benefit societies, but they have nothing to do with the collieries. There are no complaints as to the payments being made fortnightly. There is discontent on account of the composition of juries. Another complaint is that some are paid by weight and some by measure, and the men all prefer weight. There is dissatisfaction, however, about the weighing, but the colliers dare not complain. At the Brancepeth Colliery if a man complained he would have a fortnight's notice at once. There are but few Union men. The moment they attempt to combine, the leaders get notice. In my pit there are Union men, but it makes no difference there.

Mr. FOSTER: Your pit seems to be a land of Goshen.

JOHN GRIFFITHS had been a miner for 20 years in the Rhondda Valley, South Wales. He worked for the Troodriw Coal Company. There were a good many boys—20 to the 100 men—of whom five or six would be under 12 years. He had never seen any certificates until within the last six months. He would not allow boys to enter mines until 12, and from that time till they were 14 only work eight hours. The ventilation of the district was in some places very bad. They worked in stalls 60 yards long, in which there was no air-ways at all. The Troodriw Pit was well ventilated now. He always worked with a naked light. He objected to the Davy lamps, because the employers thought when those were provided they had done everything, but when they used the naked light they were obliged to see to the ventilation. The inspection was insufficient, the composition of juries bad, and the weighing unfair.

ALEXANDER McDONALD, of Holytown, near Glasgow, Lanarkshire, acting secretary of the Miners' Association, was examined at great length. He said he had worked from the age of 8 to 23 in several pits in Lanarkshire, Drumgray, Drumchapel, Darnavel, Mavisbank, and others, and for a time he took the management of a mine as under and then as overground overseer. The principal grounds of complaint which the miners had were,—1, as to inspection; 2, as to the masters; and, 3, as to the special rules. The inspection was unsatisfactory, both as to the ability and the numbers of the inspectors. The inspection was particularly defective in the two points for which it was mostly intended—namely, as to the boys employed and the safety of the mines. The law relating to boys was not sufficiently carried out. Boys were largely employed in Scotland between the ages of 10 and 12. Could not say how many boys in proportion to the 100 of men there were, but certainly more than 10. Many of the boys could not read, but they were required to have certificates. Had communicated that fact from time to time to the Inspector, and it was sometimes attended to, but not always. The work the boys had to do chiefly was called "drawing," or pushing the hutchies. It was very hard work, but not so hard as when he was a boy, as there are now tramways, which enabled them to push heavier loads with greater ease. The miners' boys might be easily known anywhere by their stunted and twisted growth. Boys who work under their own fathers are worse treated than those paid by the masters. He had just reported a case to Mr. Moore, the Inspector, in which three boys helping their father were kept down the pit three days and three nights consecutively. One of them was under 10 years of age. He wrote on that ground only, as the Inspector has no right to interfere as to hours. Boys help their parents in getting the coal and not in drawing, and on the average work 11 or 12 hours, but when employed by the masters about 10 hours. There is no system of shifts in Scotland, and boys work a little longer than the men to clear away. His suggestion for the Legislature was, that they should work only eight hours up to 14 years of age, and that none should be accepted under 12. That was the opinion of the intelligent workmen, who would also make schooling compulsory between 12 and 14. There was now no school attached to all large works; and the parents should be fined if they did not attend. They would be quite able to attend school two or two and a half hours. The custom of employing women had gained ground in the last few years. He attributes it to the fact that the masters get the work done cheaper by them than by men. He thought it was not right to employ women, and that was the general opinion. It was degrading to the women. No doubt their employment tended to keep down the wages of men, but on the point of wages he had no feeling whatever.

Sir P. DE GREY EGERTON: The wages were not very low, averaging coal, and carrying it out to the wagons at the pit head. They worked about 11 hours, and from 1s. to 1s. 6d. per day. It was laborious and dirty work. The boys employed by the masters got 1s. 3d., 1s. 6d., or 2s. per day, according to size and work. Door-boys had 1s.

By Mr. Woods: The case of a man and his boys working three days and three nights consecutively was not altogether exceptional. When men were paid by the piece he had known them go down on Wednesday and not come up until Saturday.

Mr. Woods: Is it a well-authenticated fact that it occurred at all?—Witness: It is true, the name is Macdonald, and the pit is that of the Shotts Iron Company. The men make a large profit out of them. Attached to all large works; but, in fact, they make a large profit out of them. Every man pays 2d. per week to the building fund and 2d. per week for teachers, whether he has children or not. Those who have children pay for all (except the first 1d.) per week. It was a great grievance that, while they thus amply supported the school, they had no voice in its management, or in the appointment of schoolmasters. A great many were Roman Catholics, and the teachers were all Protestants; and the pit is that of the Shotts Iron Company. They would have to pay their 4d. per week at the works just the same. One school belonging to works where there are 900 men—a calculation would show that the cost of building would be paid for in one year, and yet they had been paying to the building fund for the last eight years. The original cost would not be more than 4000, and there was the Government grant; and so, with the charge for teachers, the men held that to be exorbitant, for although 900 men paid their 2d. each weekly for teachers, the number of scholars was but about 800. The workmen had no objection to school fees, but now thought them immoderate.

Col. DUNN: The larger proportion of the miners who are Roman Catholics are Irishmen. These fees have nothing to do with medical attendance—that is altogether another matter. The fee for medical attendance is 2d. men and 1d. boys. The greatest grievance of the workmen is that as to the prevalence of the truck system. Messrs. Merry and Cunningham have ten truck stores, one at each of their works, viz.—at Carnbroe, Stevenson, Den, Balaklava, Inkermark, Glenarnock, Reddons, Haythorne, Warwick Hill, and Alnwick Lodge. Messrs. Neilson (Summeries Iron Company) have stores at Summerlee, Jerviston, Keppock, Black Hill, Kenmuir, Knighthood, and Pithead. Messrs. Watson and Co. have stores at Darnley; the Shotts Iron Company have three; the Coltness Iron Company at Newnham; and in other places; and there are others, scattered all over the district. These stores supplied everything, even to the butter milk and sweet milk of the district. They gave tin tokens for milk, which the farmers accepted as payment. If anyone did not spend the greater part of his wages he had an admonition, and if he persevered in notices to leave. The wages were paid monthly, and the best and most provident hands were allowed to have half their earnings free; but all those who needed advances, and they were the majority, were entirely in the hands of the storekeepers. When men had nothing "to lift" advances would be made them for drink, when they had no other means of support, and an indignation meeting was held on the subject a few months ago. Witness heard one of Mr. Merry's contractors admit that their men were compelled to spend half their wages at the stores. Merry's were not the worst—there were some places where the men were not allowed to take away a single penny. They had eleven spirit licenses, and they always opposed others who attempted to get them. The workmen generally preferred co-operative stores, and in some parts they were established with the consent and the assistance of the employers. The ventilation of mines in Scotland was greatly improved of late years, but it is still very bad. It is bad in the larger mines, and where they are subjected to explosive gases. There are a good many mines yet with only one single shaft and brattices. Mr. Moore, the Inspector, wrote a pamphlet on the ventilation of mines, in which he said "8000 ft. of pure air per minute would be enough to ventilate any mine in Scotland;" and he added—"If these rules were attended to an explosion in Scotland would be almost impossible." These rules "did not include the use of safety-lamps. With regard to ventilation, his suggestion was that there should be more inspectors. They bring now only two for 1140 pits, and it would take them two years to go over every pit. Two more inspectors would be required, and in case the recommendation is not attended to, it should be referred to the sheriff, or a commission, who should have power to order. The 17th clause of the 23d and 24th Vic., cap. 131, did not meet the case, as it was defeated by the peculiarities of the Scotch mode of procedure. The workmen are not satisfied with the competence of the firemen; they generally have lower wages, and are an inferior class of men. With regard to the special rules, they were objected to generally as being drawn up in the interests of the master. Rule III., for instance, stated that on beginning work at every shift colliers shall satisfy themselves concerning the safety of their working places, which it shall be their duty to do, independently of the fireman's report. That, in fact, placed upon the workmen all the responsibility properly which belonged to the masters. If a man, through ignorance or inadvertence, did not see the place was safe, he was liable to be sent to prison for three months, while the employer could not be brought up for not having the mine in a proper state of ventilation. Rule XVIII. was extremely objectionable, as it acted in a similar manner with regard to the state of the roof, the men employed by the masters to attend to that being invariably too ignorant to do it properly.

Mr. FOSTER: Do you think these special rules, which are more in the nature of instructions to the workmen, can ever override the rules laid down in the Acts?—These special rules are part of the Act of Parliament too.

The CHAIRMAN explained, in regard to the objection to Rule 19, that, by a recent decision in the case of Beard v. Maguire, it had been decided that a workman could not recover against a master for injuries arising from the neglect of a fellow-workman. After a long re-examination on many of the points urged, the CHAIRMAN (Mr. Neale) said the case on behalf of the workmen was closed, and that the next evidence would be that of the Inspectors.—The committee then adjourned until Tuesday, at 12 o'clock.

RATING OF MINES.—The subjoined is a copy of Mr. Cave's "Bill to Amend the Law in England and Wales with reference to the Assessment of Mines to Local Rates," the second reading of which is fixed for May 30:

Whereas doubts are entertained whether mines other than coal mines are liable to be rated to local rates, and it is expedient that such doubts should be removed: Be it enacted by the Queen's Most Excellent Majesty by and with the advice and consent of the Lords spiritual and temporal and Commons in this present Parliament assembled and by the authority of the same as follows:—

1.—From and after the next, mines and minerals of every description in England and Wales shall be liable to be rated to local rates in the same manner and to the



same extent so far as circumstances will admit in which and to which coal mines are liable to be rated to local rates.

Provided always, that in assessing the annual value of mines or minerals there shall, in addition to the usual deduction and allowances, be made such further deduction or allowance as will so far as can be calculated on the exhaustion of the mineral represented by accumulation its original fee simple value and the value of the capital expended thereon.

3.—Provided also that where any mine shall, at the passing of this Act, be held upon a lease reserving rent in money, royalty, toll, or due other than in kind, the occupier of the mine which by reason of this statute shall become rateable, shall be entitled to deduct from the rent, royalty, toll, or due payable under such lease, one moiety of the sum charged upon towards the said rate in respect of such mine before the day upon which such rents shall have accrued, and the lessor or person otherwise entitled to such rent, royalty, toll, or due shall allow such deduction in part payment thereof.

4.—Title of Act: This Act may be cited as the Rating of Mines Act, 1866.

**GALE'S PROTECTED GUNPOWDER.**—The following circular has been addressed to the shareholders in Gale's Protected Gunpowder Company:—  
“With reference to a circular recently issued to the shareholders of this company by Mr. Edwin Howard, a solicitor, I am directed to state that in order to protect the interests of the company the directors have given instructions for legal proceedings to be taken against the publishers of the circular. In the trial of these actions it will be proved that the statements referred to are manifestly untrue. Evidence of the recklessness of the writer of the circular is given in the statement that the Government have positively refused to use or have anything to do with the patent. So far from this being the case, the Government have sent orders for protecting powder, the last of which was received a few days since, and Mr. Gale has had a communication from the Ordnance Select Committee requesting his attendance at important experiments which are shortly to be made.”  
—DAVID KAN, Sec., Westminster-chambers, Victoria-street, London, May 11.

#### FOREIGN MINING AND METALLURGY.

The French forgemasters have adopted the bases of a new classification of plates, similar to that adopted recently in Belgium. At the same time the new tariff has not yet been finally determined on, and we cannot, therefore, publish it. At the same sitting the French forgemasters agitated various questions of special interest. Fears are entertained that the attempt to sell the Decauville Works, May 30, will prove unsuccessful; nevertheless, the terms on which the works are offered would not be regarded as exaggerated in ordinary times. The creation is announced of a small company, with a capital of 50,000fr., for the working of the forges and foundries of Brunquell, in the Ardennes, the transfer of which has just been made by the Orleans Railway Company for 600,000fr. The new company has also acquired the forge of Maurs, in the Cantal. The Bar-le-Duc blast-furnaces and foundries were recently offered for sale, but did not find purchasers. The Charentes Railway Company has ordered from the Fourchambault Forges and Foundries Company 3000 tons of rails, at the rate of 84 fr. 10s. per ton, delivered in the depôts of the company. The St. Dizier market is relatively good; charcoal-made pig is quoted nominally at 41 fr. 5s. to 42 fr. 10s. per ton; rolled iron has made 81 fr. 4s. to 82 fr. per ton, according to the weight; sheets, 91 fr. 5s. to 92 fr. 12s. per ton; hammered ditto, 101 fr. 4s. to 102 fr. 12s.; and machine, No. 20, 91 fr. 4s. to 92 fr. 12s. per ton. The transfer and approaching re-lighting of the Bois-le-Tille Rolling Works has caused great satisfaction to the producers of pig in the Moselle district; it is believed, in fact, that the quotation of refining pig will now easily revive, but this conclusion is not universally admitted. Later statistics as to the production of pig and iron in France in 1865 state matters thus:—Pig, 1,300,321 tons; iron, 844,785 tons. Meetings are announced as follows:—May 24, at Liège; May 25, at Valenciennes; May 26, at Marcellines Gas and Blast Furnace Company (with which is associated the working of the Forges of Écaussinnes Mines), May 29, at Paris; Grasseuse United Mines Company, May 29, at Montpellier; Caisse des Mines, May 30, at Paris; Campagnac Mines Company, May 30, at Paris; Gar-Rouban, &c. (Algeria), Mines Company, May 31, at Marcellines; Pallières Mines and Ironworks Company, June 8, at Marcellines; and Denain and Anzin Blast Furnace Company, July 10, at Paris. It appears that the Paris, Lyons, and Mediterranean Railway Company proposes to bring 2000 more coal wagons into use upon its very extensive system during the current year. Several additional goods engines were delivered for use last year, and 23 more will be made available in the course of 1866. The increase in the quantity of coal and coke conveyed over the company's system last year, as compared with 1864, was 79,000 tons. There was also an increase last year of 44,600 tons in the mineral traffic, and of 41,000 tons in the movement of metallurgical products. The increase in the coal and coke traffic of the Northern of France Railway, comparing 1865 with 1864, was 406,791 tons, or 18.80 per cent. The revenue derived by the company from this branch of its business showed an increase last year, as compared with 1864, of 179,400 francs. A saving of 558fr. was effected last year in regard to the consumption of fuel in the rolling stock. This saving arose from the increasing substitution of coal and briquettes for coke, which formerly was the only combustible employed for the locomotives. This substitution has acquired such importance that in the whole quantity of combustible consumed by the engines coke now figures for only 12.80 per cent. On the whole, the results obtained last year in the management of the company's rolling stock were considered satisfactory. The Grasseuse Mines are making some locomotives for the Charentes Railway Company; two of these engines, with their tenders, will be delivered at Rochefort at the end of June, and the others in July. The increase in the coal, coke, and mineral traffic of the Eastern of France Railway amounted last year to about 450,000 tons.

The Centre (of Belgium) Railway Company, whose line extends from Ecaussinnes to Erquennes and Marchiennes, has just held its annual general meeting. The report presented stated that there had been a considerable increase in the receipts during the past year. This line is of no great extent as regards its length, but it is well placed as regards the coal basin of the Centre, and its traffic is expected to acquire a very great development, in consequence of conventions which the directors have concluded with the Braine-le-Comte and Courtrai and the Coal Basins of the Hainaut Railway Companies. Two grave facts, the evil influence of which is beginning to make itself felt, now dominate the siderurgical market of Belgium. The first of these facts will be readily guessed; war has paralysed the movement of affairs; almost every one remains in an attitude of expectation; and bold inducements are those who have not restricted their operations. The second fact is the fall in prices at Glasgow—a fact of great significance to Belgium, as a more cheerful aspect of the English market would have rendered in Belgium iron possible at a price practicable. But without this aid the Belgian works may have to carry on their operations at a loss, or at any rate at a reduced profit. It is very difficult now to fix current prices in Belgium. The top price for first-class rolled No. 1 iron at Charleroi is 67 fr. 16s. to 71 fr. per ton. A quotation of 41 fr. per ton for No. 5 casting pig, very laboriously acquired, cannot now be sustained, especially against the competition of English pig; refining is a little firmer. At Liège pig is firm, while iron and plates are neglected; the Liège construction workshops might be better occupied than they are at present. The summer season, when the movement and deliveries of Belgium are relatively satisfactory. The coal owners profess great faith in the coming autumn and winter season; many events may, however, occur to change the aspect of affairs, and this consideration has induced coal owners to be more ready than hitherto to conclude contracts. It is at Liège that the influence of the current season has been most felt; important contracts have been concluded at prices 100 fr. per ton below those asked a month since. The terms at a recent adjudication for the State system of railways were 2s. 6d. per ton lower at Liège than at Charleroi—a fact which shows that at Liège the future appears to be a very uncertain one. At Charleroi freight for Favis is high, having attained 10s. 6d. to 11s. 6d. per ton; boats are scarce. In the Centre the state of the coal trade is at least as favourable as at Charleroi. At Mons there is every reason to be satisfied with the movement and orders; boats are, unfortunately, scarce, and freights are high. The Bleyberg Mines and Foundries Company will pay next month a dividend of 61 fr. per whole share, or 12 fr. 4s. per fifth share; this dividend will be payable at Liège and Antwerp. The Nouvelle-Montagne Company will pay on June 30 a dividend of 21 fr. per whole share, and 8s. per fifth share at Brussels. The dividend of the Belgian Collieries Company for 1865 is fixed at 1s. per share; half payable June 30 and half Nov. 30, 1866. The following Belgian companies have held meetings this week:—Austrian Mining Company, on Monday, at Brussels; Conchard du Pignon Colliery Company, on Monday, at Quaregnon; Crachet and Picquary Collieries Company, on Monday, at Frameries; Herve-Wergifosse Collieries Company, on Monday, at Herve; Jemeppe-Auvellais Collieries Company, on Wednesday, at Brussels; and Espérance Ironworks and Rolling Mills Company, on Thursday, at Louvroil, near Maubeuge. The Vasin-Aulnoye Company will meet on Thursday at Huy; and the Antwerp Forges and Workshops Company, May 28, at Antwerp.

There has been some confusion as to the amount of dividend paid by the French company known as the Forges et Chantiers de la Méditerranée. It is 41 fr. per share (for 1865), of which 12 fr. 4s. per share has been already paid, leaving 28 fr. 16s. per share for division during the current month. This distribution absorbed 64,000fr., and a sum of 1866fr. having been carried forward to the credit of 1866, it follows that the total available profit realised during 1865 was 63,866fr. During the exercise 1865 the company had to traverse exceptionally difficult circumstances. Thus we must recall the disasters occasioned in the South by the cholera; the yards at Marcellines were not much affected by this visitation, but at the Septeuve establishment work was almost interrupted during September. In the workshops of that district the number of workmen, which amounted to 2500, has fallen to 740, and the company has had to regret the loss of 100 of its own staff. The company's operations were, nevertheless, attended last year with good results, the production during 1865 representing a value of 400,000fr., or 10 per cent. more than in 1864. Some important orders were carried out last year by the company. Thus the Ottoman Government, which formerly supplied its requirements wholly in England, purchased three armour-plated gun-boats for the Danube. The Viceroy of Egypt has ordered a tug of 120-horse power, besides two large steamers, which are now in the company's yards. The French Maritime Transport Company, formed under the auspices of the General Company for Promoting French Industry and Commerce, has ordered nine boats, of 120-horse power each; three of these steamers are already delivered, and their trial trips have been attended with satisfactory results. The Isthmus of Suez Canal Company purchased last year dredges, boats, and lifting apparatus. We ought especially to note, also, an important order given to the company by the Prussian Government for an armour-plated frigate of 1000-horse power; this is a work of about 240,000fr. In the course of 1865, the company delivered to the Brazilian Government a large armour-plated frigate. It also completed engines of 1000-horse power intended for the French frigate *Le Suroit*. The number of workmen employed in this company's yards now exceeds 5000; it averaged 4500 during the past exercise. Before closing our notice of this important and apparently flourishing company, we ought, perhaps, to note that the dividend paid for 1864 was at the same rate as that now declared for 1865.

According to advices from Havre, some symptoms of revival have appeared in Chilian copper, 831 fr. per ton having been paid for 11 tons of disposable; 131 tons of disposable have also been dealt in at 81 fr. at Paris. 21 tons to be delivered in the second half of May on the same terms, and 10 tons to be delivered in the second half of July at 82 fr. 10s. Affairs have been almost quiet at Paris; Chilian has been quoted at 821 fr., and Corocoro mineral at 841 fr. per ton. At Hamburg the market is destitute of animation, and affairs have very little importance. The Berlin market has been quiet; at Cologne and Stettin prices have been nominal, and on most of the secondary markets affairs have been inactive. Tin has been very quiet on the Hamburg market, and transactions have been limited to the requirements of consumption. At Berlin and Cologne affairs have been quiet, and prices have remained without change. On the Amsterdam market Banca remains feeble, and is quoted at 47 1/2 fr. to 47 3/4 fr. At Rotterdam the sale is mentioned of 400 blocks of Banca at 47 1/2 fr., and 800 blocks from the same source at 47 fr. Some blocks of Banca have been sold in the Antwerp market, to meet the immediate requirements of consumption, the terms being 54 fr. per cwt. Contrary to the general tone of other metals, lead remains in a relatively good position, having regard to the present state of affairs, and to the tension of the money markets. At Hamburg transactions have been

far from numerous; nevertheless, prices previously indicated have been firmly maintained. A Berlin letter says that of late the attention of speculators has been directed to Tarnowitz, which, by reason of its scarceness, and the enquiry of which it is the object—the Prussian Government having just proposed the delivery of 12,000 cwt.—is very firmly held. The Stettin market has been firm; Cologne has remained without change, but prices have been well supported. Under the influence of the reduced quotations current in the English and French markets, zinc is held at a rather decided reduction at Hamburg; the transaction which has taken place has been of little importance. The Bremen market remains inactive, under the influence of the political situation; prices have for some time past been nominal. The scarceness of stocks, and the fears of war have had a tendency to maintain quotations, as, in consequence of those influences, it is expected that a good many makers will be obliged to curtail their production from the latter cause.

#### MINING NOTABILLIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

**GREAT WHEEL VOR.**—Important improvements have taken place in these mines during the last week. Wheel Metal appears to be opening out on a large course of ore dipping west, as predicted, and gives every assurance of a large and productive mine for a long time. The lode in the bottom of Ivey's shaft, which was 200 ft. deep, is a fine specimen of low price tin, has all the character of the rich courses of ore which have distinguished this great mine. The bottom of the mine generally, from the 174 ft. level downwards, and east and west of Ivey's shaft, is opening out well, with every appearance of large improvements. It is to be regretted that the shareholders are deprived of the full benefits of success by their large monthly returns being sent to market when tin is ranging at lower prices than it has done these last 30 years, and is a loss of profits to them, on their present returns, of over 2000 fr. per month. Had the management been cautious, and preserved its mine, they may yet reap abundantly from their resources in reserve. We believe there is scarcely another tin mine in Cornwall, holding the position of Wheel Vor in this time of depression, and it is to be hoped better times are not distant. Captain Wilkin, of Basset and Grylls Mine, inspected Wheel Metal this week, and states that the present returns can be maintained without trenching on the reserves. He reports the lode in the bottom of Ivey's shaft at 4 tons of tin to the fathom.

**FOXTDALE MINES (Isle of Man)** will sell 100 tons of silver ore on May 22, and 100 tons of common ore on May 25.

**GREAT WHEEL FORTUNE.**—At the meeting held in March last the lode in the bottom of Hoskin's shaft, then down 6 fathoms below the 114, was reported to be large and of great promise. This point of interest has been with great anxiety, and the agents state that within the last few days the lode in the shaft has materially improved, and is a great and rich lode, and according to samples worth 501 fr. per fathom for the length of shaft. Another point noticed in the March report was the 114, east of Carmel engine-shaft; the lode was then split up into branches, but the agents considered that in a little further driving these branches would be found united with the north part of the lode; the junction was considered likely to effect a very favourable change. This has been singularly verified. The circular just issued to the shareholders says:—“We have also an important discovery in the 114, driving east of Carmel engine-shaft; a splendid looking lode, with large streams of water flowing from it, and a fine leader of rich tin on the footwall side. The 114, west of Hoskin's shaft, continues to produce good stones of tin in the bottom of the level. The winze sinking below the adit, on Tagg lode, is still holding good.” A more cheering and satisfactory announcement has not been made for a very long time than this discovery in Great Wheel Fortune; it appears pretty certain that they are just entering on another great deposit of tin. There can scarcely be a question as to the ultimate result of this discovery, the great probability being that even at the present low price of tin the mine will be permanently profitable, and that the splendid profits must be made. There are but 1798 shares in the mine. Shareholders are strongly advised to hold their shares; they are already difficult to get.

**CAPE CORNWALL.**—There is little doubt of this property doing well for the adventurers, and now that the mine has been properly laid out for extensive development the returns will show what may be fairly expected from the further prosecution of the enterprise. The new engine (bought from the Wheel Fortune) has gone to work, and is doing its duty well: this will enable the stamps to be working full time, and the returns from the eastern ground will consequently be much increased. The western part, where the lode is looking so well for copper, is at the 70 ft. level (not at the 90, as I saw last week), and I hear from the agent that they have a stream of water coming from the end. It certainly looks well for a course of copper, and Capt. Pryor, who inspected the mine a short time since, says that he fully believes the capter lode will make a deposit of ore when reached, and that the intersection is likely to prove a prize. This point will now be shortly proved, and is naturally being watched, as a discovery of any value at all must make the property very valuable, from its proximity to the other mines. It is a pity that the mine is not a cost-book one, as any difficulty as to capital would then be avoided; still, as a shareholder holding more than 100 shares, I presume there will not be any difficulty in providing funds to develop so very promising a property.

**NEW WHEAL BASSET.**—The lode in the winze sinking below the adit continues to look well, and will fully come up to the estimate given last week—3 tons of blende per fathom, containing some splendid stones of copper and lead ores. There are men engaged in costaining other lodes (west of the cross-course) which are known to traverse the seat, and are said to be rich in blende and silver-lead ores. Several respectable mine agents have been on the mine, and all speak of it in the highest terms, and express their gladness at seeing such a promising concern being opened up in the present depressed state of tin and copper mining.

**MINING IN FLINTSHIRE.**—An amalgamation has taken place between the Rhosmor and South Pant-y-Gof Lead Mines, Halkin Mountain, under the name of the Great Rhosmor Company (Limited). This is likely to become a great concern, under the management of a very respectable committee, the Mayor of Chester being at the head; he is also connected with an extensive mine, in the best part of the Mountain, near to that from which the Grosvenor family received 100,000fr. a year, and is still doing well, under a company in London, who hold under lease from the Marquis of Westminster. Royalty 11 fr. per ton. The miners are sinking the engine-shafts of the Great Rhosmor 10 fathoms deeper.

**EAST SNAFFELL.**—The expectations held out some time since relative to this property seem likely to be immediately realised. The lode intersected in Glen Chertsey set has been driven on 3 fathoms, and Capt. W. H. Rowe has broken from the bottom some magnificent specimens of blende and silver-lead ores, which none have been taken from any mine in the neighbourhood at the same depth, not excepting Great Laxey.

**THE PRINCE OF WALES MINE** is situated under the granite range of Hington Down, and at the foot of the celebrated Hington Down Mine, now paying and likely to pay dividends for years. Prince of Wales is in the market with 50 tons of rich ore over the average quality. The mine is looking well, and with careful management and proper machinery will become a good one.

**GEOLOGICAL SOCIETY OF LONDON.**—May 9: Mr. Warington W. Smyth, M.A., F.R.S. (President) in the chair. The Hon. John Abercromby, Lieut. Rifle Brigade, Chapel-street, Belgrave-square; Edward Davis, Marina Grande, near Lisbon; and Edward St. John Fairman, Via Santa Maria, Pisa, were elected Fellows:—

The following communications were read:—  
1.—“On the New Species of *Acanthodes* from the Coal Shales of Longton,” by Sir Philip de M. Grey Egerton, Bart., M.P., F.R.S., F.G.S. Owing to the kindness of Mr. Ward, of Longton, the author had been enabled to examine a considerable collection of specimens of the *Acanthodes* fishes of the North Staffordshire coal field. The specimens were all imperfect, the anterior parts of the fish being rarely preserved, and even when present being in a very mutilated condition; but Sir Philip Egerton had been able to determine the distinctness of at least one species, which he now described as *Acanthodes Wardi*. This species was far less bulky and more elongated than *A. Bronni* from the Sarnbrook coal field; but it was not so slender as *A. gracilis* from the Permian beds of Kleinendorf.

2.—“A Sketch of the Gravels and Drift of the Fenland,” by Harry Seeley, F.G.S.  
3.—“Additional Observations on the Geology of the Lake Country,” by Professor R. Harkness, F.R.S., F.G.S., and H. Nicholson: with a Note on the Trilobites, by J. W. Saiter, F.G.S.  
4.—“On the Lower Silurian Rocks of the Isle of Man,” by Prof. R. Harkness, F.R.S., F.G.S., and H. Nicholson.

The following specimens were exhibited:—Silurian Fossils from Cumberland and the Isle of Man, exhibited by Prof. Harkness, and Specimens of Sandstone and Shale from the North Staffordshire Coal Field, exhibited by J. Ward. Copper Ores from Lake Superior, presented by the Hon. J. D. Caton. Specimen of Salt from a remarkable deposit 150 ft. above the level of the surrounding swamp, near the shores of the Gulf of Mexico, Louisiana, presented by the Hon. J. D. Caton. Six Photographs of Ancient Sculptures on Reindeer Horn, presented by the Marquis de Vibraye, For. Corr. G.S.  
On Wednesday, the following papers will be read:—1. “Notes on the Geology of Sinal,” by the Rev. F. W. Holland, communicated by Sir R. I. Murchison, Bart., K.C.B., F.R.S., &c.—2. “On a new Phylloporous Crustacean from the Moffat Shales, Dumfriesshire,” by H. Woodward, F.G.S.—3. “On a new Crustacean from the Forest Marble, Wiltshire,” by H. Woodward, F.G.S.—4. “On the genus *Eryon* of the Lias and Oolites,” by H. Woodward, F.G.S.—5. “On Primordial Fossils in the Lingula Flags of Tyddingwadi,” by J. Plant, F.G.S.

**INSTITUTION OF CIVIL ENGINEERS.**—At the meeting of this society, on Tuesday, Mr. John Fowler, President, in the chair, his Royal Highness Prince Alfred, K.G., was elected an honorary member. At the ordinary ballot, the last of the present session, seven members and six associates were balloted for and declared to be duly elected, including in the former class Mr. James Melville Balfour, chief of the marine engineering department, Otago, N.Z.; Mr. William Clarke, chief assistant engineer on the London and North-Western Railway; Mr. James Collet, first-class district engineer, East Indian Railway; Mr. Henry Wheeler Davis, acting engineer to the Great Eastern Railway; Mr. Jonathan Dickson Ikin, Westminster; Mr. Alfred Moore, resident engineer of the East Waterworks; and Mr. William Smith, chief engineer of the Calcutta Waterworks; and in the latter class, Mr. James Henry Cottrell, Stone-street; Mr. Charles Foote Gower, Westminster; Mr. James Sidney Hargrove, Westminster; Mr. John Gillett Livsey, surveyor to the Local Board of Health, Ventnor, I.W.; Mr. John Gordon McKendle, Swansea; and Mr. William Barrow Turner, Dalton-in-Furness.

**FLOODING OF A MINE—EIGHT LIVES LOST.**—A fatal accident, resulting from the tapping of old workings, occurred at the Furse-hill Wood Mine on May 12, by which seven men and one boy lost their lives. Three of the men are unmarried, but the others leave four widows and nine children. It appears that Michael Yeo was sacrificed in the heroic attempt to save those further back in the level. Capt. Doidge was above ground when the fatality took place, and he gained the first intimation of what had occurred from the two boys who were saved on going to the mouth of the pit in order to descend. He quickly went down, and found that the water had filled the mine, and had already risen to the extent of 15 fms. above the entrance to the 40 ft. level, filling, of course, the whole mine with water up to that point; and after going through the whole of the workings that were traversable, to see that no men remained there, Capt. Doidge was obliged by the water to return to the surface. Only a very small quantity of the water has been forked; it has, therefore, been urged that decisive steps should at once be taken for increasing the power of the machinery now on the mine. In the meantime it is satisfactory to know that everything is being done that humanity can suggest for alleviating the sorrows of the bereaved, and for relieving the bodies when they are brought to surface.

**MINE SALE.**—Mr. Jehu Hitchens, on Tuesday, at Garraway's, offered for sale by public auction Wheel Unity Consols Copper Mine. After several biddings the property was “bought in.” Subsequently, several lots of mine shares were sold.

#### India Office.

**BY ORDER OF THE SECRETARY OF STATE FOR INDIA**  
IN COUNCIL, notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 21st inst., to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to supply—  
PIG IRON.  
And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock p.m., of the said 21st day of May, 1866, after which hour no tender will be received.  
GERALD C. TALBOT, Director-General.

India Office, May 14, 1866.

**TENDERS ARE REQUIRED** by the directors of the CALDBECK FELS (CONSOLIDATED) LEAD AND COPPER MINES, near WIGTON, CUMBERLAND, on or before the 28th inst., for the SUPPLY, DELIVERY, and ERECTION on the above mines of a new or good SECOND HAND CORNISH PUMP-ENGINE of 70 ft. in cylinder, with TWO BOILERS of not less than 12 tons each. Also, for a ROTARY WHIM ENGINE of not less than 24 in. cylinder, with a 10 ton BOILER and winding gear complete.

The tenders must include every cost and charge (except the erection of buildings) for the efficient working of the same, and for their maintenance, free of cost or charge to the company for one year after they shall have been erected, and certified as fit and complete by the company's engineer.

The directors do not bind themselves to accept the lowest or any tender. Particulars and specifications may be seen at the offices of the company, 192, Gresham-house, Old Broad-street, London, E.C. By order, W. G. FOWLING, Sec.

**TO BE SOLD, A STEAM-COAL COLLIERY IN THE VALE OF NEATH**, connected by a siding with the Vale of Neath Railway. The coal (a seam of 9 feet thick) has just been won by the proprietor of the estate, who declines going into the trade himself, but wishes to recover his outlay (£11,000), and let his coal at a royalty of 8d. per ton, under an area of 600 acres.  
Apply to DAVID LEWELLIN, Esq., C.E., Glanwen, Pontypool.  
Promoters of limited companies need not apply.

**COLLIERY—FOR SALE, BY PRIVATE CONTRACT, A** very DESIRABLE COLLIERY PROPERTY, IN WALES. It has been recently opened by level and slant on two veins, one of which has long been on the Admiralty List, and is in high repute for steam purposes. Underground roads and airway communications are so far completed that upwards of 100 tons of coal per day can be immediately raised, and this quantity can be doubled in a short time with very little additional expense. There are excellent surface railroads and siding accommodation, giving the colliery direct access to three shipping ports. The property is on the main trunk line of communication between Swansea, Liverpool, and the North.  
For detailed particulars, and to treat, address “X. Y. Z.” Mr. Osmond, stationer, 29, Ironmonger-lane, Cheapside, London.

**RADNALL FIELD COLLIERY—TO BE SOLD, BY PRIVATE TREATY**, all that COLLIERY, known as the RADNALL FIELD COLLIERY, situated at OLDBURY, in the county of WORCESTER, with the ENGINE, PLANT, and MACHINERY belonging thereto. The colliery contains Thick Coal, Heathen Coal, and White Stone; and consists of 194. 3/4. 277. of surface land. The whole of the White Stone is ungot, and the greater portion of the Thick and Heathen Coal also remains.—For further particulars, and to treat, apply to Mr. JOHN CLEVELAND GREEN, at the Dudley and West Bromwich Bank, Dudley.

**DESIRABLE INVESTMENT.—A FREEHOLD ESTATE** of 140 acres, beautifully situated, overlooking the Severn and the Bristol Channel, and rich in minerals (COAL and HEMATITE IRON ORE), FOR SALE, at a price scarcely in excess of its surface value.—Particulars of Mr. THOMAS BLAKE, estate agent, Bank Offices, Ross, Herefordshire.

**GRANITE QUARRIES TO LET, OR LEASE.—ONE OR TWO** large QUARRIES of excellent GRANITE, on the eastern coast of IRELAND within two miles of a pier, where the blocks may be embarked. It can be taken out in large blocks, and polishes well.—Address, “C. D.” Mr. Mitchell's Royal Library, 33, Old Bond-street, W.

**SLATE QUARRY INTEREST TO BE DISPOSED OF.**—The HOLDER of the grant for a very valuable SLATE PROPERTY IN IRELAND, most favourably situated within 80 yards of an admirable quay, at which a vessel of 300 tons may ride when fully laden, DESIRES TO DISPOSE OF AN INTEREST therein. The length of the vein is upwards of half a mile, and the lease is for thirty-one years at 1-24th royalty during the first four years and 1-20th afterwards. The slates are of admirable quality, the blocks of largest size, of easy cleavage, and free from oxides or nodules. The local demand is beyond the supply, and the same vein is being successfully worked, with 60 men, in the adjoining property. A capital of £4000 or £5000 is required, and it is believed that 60 per cent. profit could be realised.—For further particulars, apply to “W. C. L.” MINING JOURNAL OFFICE, 26, Fleet-street, E.C.

**TO BE LET, WITH IMMEDIATE POSSESSION, for a term of 21 years, A VALUABLE SLATE QUARRY**, situated within half a mile of the sea, and six miles from Dartmouth. Can be worked with a small outlay of capital, and offers a good investment for a company, or for a large body desirous of raising his own roofing and other slate.—For further particulars, apply to Mr. L. J. O'DRISCOLL, Bridgetown, Totnes, Devon.—April 8, 1866.

**PORTABLE ENGINES, WITH PIT WINDING GEAR.**—Portables in stock up to 14-horse power. Gear to order to suit circumstances.—Apply to BARROWS and CARMICHAEL, engineers, Banbury, OXON.

**FIRST-CLASS PORTABLE ENGINES, of 8 and 10-horse power** (with or without link-motion reversing gear), specially adapted for ECONOMY in the CONSUMPTION of FUEL, and READY for IMMEDIATE DELIVERY.—Particulars on application to BADGER and SON, Engineers, Rotherham.

**NOTICE.**—Notice is hereby given, that the COAL BUSINESS CARRIED ON for many years by Mr. JOS. DUNSTAN will, on and after the 1st March next, be CONTINUED under the FIRM of J. DUNSTAN AND CO. To the above will be ADDED the BUSINESS of GENERAL MERCHANTS, ATTORNEYS, MINE BROKERS and SHAREDEALERS, MINE PURSERS, COMMISSION AGENTS, ACCOUNTANTS, &c.  
J. DUNSTAN and Co. hope, by strict application to all matters of business entrusted to their care, to merit a liberal share of public patronage.—Truro, January 24, 1866.

**IMPROVED ORE-DRESSING MACHINERY.**—FULL PARTICULARS relative to the IMPORTANT IMPROVEMENTS recently made by Mr. HUNT in his PATENT ORE SEPARATOR and GOLD WASHING MACHINES can be obtained on application to Mr. WILLIAM WARD, 95, Bishopsgate-street Within, or to Mr. JOHN HUNT, Portliver, Helston, Cornwall.  
A WORKING MODEL of the MACHINE will be shown and explained at Mr. WARD's office, as above, on Tuesday, the 22d inst., from Twelve to One o'clock, or it can be seen working at the Patentee's Silver-lead Works, Portliver.  
Mine proprietors, or others, having refuse ore of any kind, or slag containing metal, at their disposal, will please send full particulars to Mr. HUNT, who is prepared to treat for the same on liberal terms.

Swan Rope Works.

**GARNOCK, BIBBY, AND CO.,** CHATEL STREET, LIVERPOOL, MANUFACTURERS OF FLAT and ROUND HEMP and IRON and STEEL WIRE OPES for MINING, RAILWAY, and SHIPPING PURPOSES. MANILLA ROPE of SUPERIOR QUALITY, FIFTY PER CENT. STRONGER and THIRTY PER CENT. CHEAPER than Russian hemp rope. WIRE ROPE of FIRST QUALITY WIRE, and the HIGHEST STANDARD of STRENGTH.

**CHARLES DAVEY AND CO.** SAFETY FUSE MANUFACTURERS, ST. HELEN'S JUNCTION, LANCASHIRE.

TO ENGINEERS, MINING COMPANIES, AND OTHERS.  
**JOHN TURNER** (of Sheffield), 3, FINKLE STREET STOCKTON-ON-TEES, MANUFACTURER and REFINER of SUPERIOR CAST-STEEL for MINING DRILLS, PUNCHES, TURNING TOOLS, and TAPS, at reasonable prices. Soliciting a sample order.

A Stock of Steel and Mining Tools kept at the above address.

**MESSRS. BEOR AND KENRICK,** MINING ENGINEERS, SWANSEA AND RUABON.

MESSRS. BEOR and KENRICK undertake the inspection and survey of Estates and Mineral Properties at home and abroad; and are open to contract for the erection of mine machinery, the sinking of shafts, and boring of untired ground. In all cases a plan will accompany their reports. References given.

**ROBERT LIBBY AND SON,** MINE AND SHAREDEALERS, &c., CAMBORNE, CORNWALL, Recommend the undermentioned mines for immediate investment:—  
West Gof Work. East Lovell. Wheel Trannack. New Clifford. Rosewarne United.  
The above mines are quite safe for a great rise in price, and should be bought immediately. Mines inspected by competent agents.

Now ready, price 6s. by post 6s. 4d.,  
**THE MINES OF CORNWALL AND DEVON:** STATISTICS AND OBSERVATIONS, for 1865.  
By THOMAS SPARGO, Mining Engineer, Stock and Sharebroker, Gresham House, Old Broad-street, London, E.C.

**AMERICAN JOURNAL OF SCIENCE AND ARTS,** published by Professors SILLIMAN and DANA (aided editorially by Professors GRAY, AGASSIZ, CUBBER, JOHNSON, BRUSH, and NEWTON), at New Haven, Connecticut, every other month, commencing each year with January, in numbers of 140 pages each, making two volumes a year. Now in its forty-eighth year. The ninety-second volume (or forty-second volume of second series) commences July 1, 1866. Messrs. Trübner and Co., 60, Paternoster-row, London, agents.

**£250,000 HAVE BEEN PAID AS COMPENSATION FOR ACCIDENTS OF ALL KINDS BY THE RAILWAY PASSENGERS' ASSURANCE COMPANY.** Invested capital and reserved fund, £250,000. Annual income, £35,000. An Annual Payment of £3 to £5, secured £1000 in case of Death, or £5 per week while laid up by Injury.  
For particulars apply to the Local Agents, at the Railway Stations, and OFFICES,—44, CORNHILL, and 10, REGENT STREET.  
W. J. VIAN, Sec.



## Wedge Testimonial Fund.

WEDGE TESTIMONIAL FUND.—  
Lancashire Insurance-buildings, St. Ann's-square, Manchester, May 3, 1866.COMMITTEE.  
CAMPBELL M. THOMAS, Esq., C.E., F.S.A., Dolph House, Redruth and Manchester—Chairman.W. H. WILLIAMS, Esq., 7, Cock-street, Manchester—TREASURER.  
R. SYMONS, Esq., C.E., Truro.  
The Hon. EDWARD LEESON, the Temple, London.  
Mr. Commissioner HOARE, Mountjoy-square, Dublin.  
DAVID CRESSY, Esq., Brock Hall, Wexford.  
Rev. W. & L. ALL, Castle Froome Rectory, Bromyard.  
GEORGE HENWOOD, Esq., F.S.A., Malpas House, Sandymount, Dublin.  
ALEXANDER MILLER, Esq., merchant, Ashton-on-Mersey.  
CHARLES PENNELL, Esq., M.D., R.N., H.M.S. "Doris."  
Rev. THOMAS McNALLY, B.A., LL.B., T.C.D., 4, Wesley-place, Dublin.  
JOHN BURKE, Esq., Elmville, Clonmel.  
FRANK MICHELL, Esq., C.E., Redruth.  
JAMES SHEANE, Esq., Mountmellick.  
GEORGE EUSTACE, Esq., C.E., Hayle.  
Rev. W. G. MAYNE, Ingrow Parsonage, Keighley.  
HENRY MARSDEN, Esq., William-street, Southampton.  
WILLIAM BEVAN, Esq., 7, Horfield-road, St. Michael's, Bristol.  
CHARLES ROBERTSON, Esq., solicitor, 24, St. Martin's-lane, London, E.C.  
Capt. JOHN POMEROY, Devon Lanes Mine, Tavistock.  
L. BEAVER, Esq., 70, Cross-street, Manchester.  
S. DOWNEY, Esq., Pursuer of East Broadwood Mine, Castle-square, Exeter.  
GEORGE WYSE, Esq., M.D., Upper Sackville-street, Dublin.  
C. S. HALL, Esq., M.R.C.S., Carlisle.

The object of the testimonial is so fully and lucidly explained in the following correspondence between Campbell M. Thomas, Esq., C.E., F.S.A., and Robt. Symons, Esq., mining engineer, of Truro, in which correspondence the proposed fund originated, that the committee do not think they could do better than refer to it:—

Redruth, March 26, 1866.—MY DEAR SIR: It has been pressed upon me for the last few months, by various friends in Manchester and Cornwall, that all of us interested in metallic mining should do something to testify our recognition of the extraordinary services rendered to mining, and the wonderful success attained, by our friend Mr. Erwin Harvey Wedge, F.G.S. I have been slow myself to make a move in promoting a testimonial to Mr. Wedge, fearing that, from the well-known diffidence and modesty of his character, the project would be rather distasteful to him than otherwise; but as my mining friends are unanimous in thinking that we should not allow ourselves to be too much influenced by such a purely private consideration in promoting a suitable recognition of what are, after all, public services, I have decided on addressing myself to you, as a mining engineer and surveyor, of unsurpassed position and experience in Cornwall, for your candid opinion on the subject.

Knowing, as we all do, how many testimonials are got up which are not, in any real sense, public testimonials at all, but at best merely the expressions of regard of a private circle, I feel how careful one should be in promoting a testimonial to a person with whom—as is the case with Mr. Wedge—one is connected by ties of friendship and gratitude. I am sensible how much the feelings of admiration I entertain for the private worth of Mr. Wedge may bias my judgment as to the value of his public services; but public services alone should be taken into account in presenting any man with a public testimonial. I, therefore, write to ask you to give me your frank views on Mr. Wedge as a public benefactor to the metallic interest of the kingdom. You are not, I believe, personally known to Mr. Wedge, and, therefore, cannot be influenced by any personal feelings of friendship, but you will do all he has done in mining, and which no man in the kingdom is more competent (from your vast experience) to estimate at its true value, or more fit (from your high character and position) to give an authoritative opinion on.

Believe me, my dear Sir, yours very truly,  
Robert Symons, Esq., Truro. CAMPBELL M. THOMAS.

Truro, April 2, 1866.—MY DEAR MR. THOMAS: Pray accept my apologies for not having replied before to your letter of the 29th, with reference to Mr. Wedge. I have been absent from home over Good Friday and Easter Sunday, and have only just got back this evening. I give you this explanation, for I should regret if you supposed that I had cause for an hour's hesitation or delay in giving my views as to Mr. Wedge's public position in the metallic mining community.

Although you speak of the complimentary of the position I hold in my profession, it is still a fact that man in the counties of Cornwall and Devon has had such an extended experience as a mining surveyor as I have had. I, therefore, ought to be able to form an opinion worth something as to the value of the services of any man in the cause of metallic mining. For nearly 40 years I have had the constant opportunity of going over professionally every mine in the two counties, and during the same period I have necessarily been brought in contact with every man of the least eminence connected with mining pursuits. Strange to say, as you remark in your letter, I have no personal acquaintance with Mr. Wedge, for of late years I have restricted my business to old standing engagements, and I do not know everything Mr. Wedge has done in mining—and this I do say, that since the late Mr. John Taylor came down into Cornwall, upwards of 40 years ago, and started the Consolidated and United Mines, we have not seen any man in Cornwall to compare with Mr. Wedge in energy or ability. He has accomplished results in mining which I would not have believed if I had not known them personally to be facts, and that is an opinion I venture to say no man in Cornwall will attempt to dispute. We have had, within my remembrance, several men who have from time to time shown a new life into mining, and who have successfully succeeded in opening up for whole districts a career of wealth and prosperity. I could name such men as the late Mr. Halse, M.P., the late Mr. Joseph Lyle, the late Mr. Pendarves, M.P., the late Mr. Michael Williams, M.P., and many others; but of late it cannot be denied that men of this class have been wanting. It may be said that I speak with the prejudices of the past, which is so often said to unduly disparage the present; but I do not think this is the case, and in proof of it I recognise in Mr. Wedge one worthy to be ranked with those master spirits who in former days I learned to look up to as beyond the ordinary run of men.

I don't know if I can say more, in my opinion, has ever more worthily earned a public recognition of gratitude than Mr. Wedge. You need, therefore, have no hesitation in pushing forward your testimonial; and I need scarcely say you may calculate, in carrying it out, on my cordial aid in any manner I can be useful.

I remain, yours most respectfully,  
Campbell M. Thomas, Esq. ROBERT SYMONS.

In accordance with the views expressed in these letters, the committee invite subscriptions for the purpose of presenting a testimonial, in the form of a piece of plate, value 300 guineas, and a marble bust, to be executed by Neville Burnard, Esq., the eminent Cornish artist, to Erwin Harvey Wedge, Esq., F.G.S., in grateful recognition of the magnificent services rendered by him to the cause of metallic mining throughout the United Kingdom.

The committee had intended to have conducted the testimonial to the piece of plate, but having received a communication from Mr. Neville Burnard (extracts from which are annexed), they have decided on following the precedent of the Williams testimonial, therein referred to, and have, consequently, commissioned Mr. Burnard to execute a similar bust of Mr. Wedge. They are fortified in this resolution by the fact that, from the notifications of subscriptions already received, the sum of 300 guineas will probably be far exceeded.

36, High-street, Eccleston-square, Piccadilly, S.W., April 24, 1866.—You may remember that some years since a testimonial of a somewhat similar character was presented to the late Michael Williams, Esq., M.P., by the Williams testimonial committee, partly of a piece of plate, and partly of a marble bust, which I had the honour to execute for the committee. Should the gentlemen who propose this testimonial decide that it shall consist of a bust and a piece of plate, I should be happy to make a highly-finished bust in the best statuary marble. I have executed a bust of the late Mr. Cobden, which will be exhibited in the Royal Academy during the coming season. Of this bust, Mr. Bright says—"It is as good, I think, as you will rarely see of any man that has passed from among us."

I may be allowed to say that in the case of the Williams testimonial the idea of the bust was suggested by me, and was very warmly taken up by the committee, who were glad that I made the proposal, as the idea had not occurred to them. I may also be allowed to mention that at the Hall of the Royal Cornwall Polytechnic Society at Falmouth, a gallery of portraits and busts of distinguished Cornishmen is gradually being formed; among the men so honoured, I have had the privilege of placing busts of the Duke of Cornwall; Boscawen, the historian; Admiral Boscawen; Trevithick, the engineer; Robert Fox; Sir Charles Lemon; Charles W. Peach, the naturalist; J. T. Treffry; Adams, the astronomer, a cousin of Mr. Wedge; Michael Williams, Esq., M.P.; and a bust of Mr. Wedge might be added to the list—I mean a cast. The marble bust would, I presume, be presented to Mr. Wedge's family.

J. J. Cunah, Esq. NEVILLE BURNARD.

Subscribers' names or subscriptions may be sent to the treasurer or the undersigned.  
JOHN J. CUNAH, Lancashire Insurance-buildings, St. Ann's-square, Manchester, Hon. Sec.

Now ready, crown 8vo., price 2s. 6d., a Treatise

(Dedicated by permission, to the Right Hon. W. E. Gladstone)

ON THE EXTENSION OF THE ENGLISH COAL FIELDS

BENEATH THE SECONDARY FORMATIONS OF THE

MIDLAND COUNTIES.

Also,

DOES COAL EXIST NEAR LONDON, GEOLOGICALLY

CONSIDERED.

By JOSEPH HOLDSWORTH, Esq., M.G.S., &amp;c., &amp;c.

London: Published at the MINING JOURNAL OFFICE, 26, Fleet-street, London, E.C.

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THE CONSERVATIVES AND "LIBERALS:"

THEIR PRINCIPLES AND POLICY.

Second Edition, with an Introductory REFORM QUESTION, &amp;c.

By J. H. MURCHISON, Esq., F.R.G.S.

London: Saunders, Otley, and Co., 66, Brook-street, W.

OPINIONS OF THE PRESS.

Mr. Murchison reviews at length the Government Franchise Bill, and shows that it is not in the least required.—Standard.

Mr. Murchison fairly won his spurs in his able pamphlet in anticipation of the last general election, and the world has obtained in public estimation is evidenced by the rapid sale for a second edition of his brochure. Very few weeks have passed away since we had the satisfaction of expressing our gratitude to the author for his able and well-timed labours. He has added, in this edition, a yet greater value to his previous exertions, by a well-written preface, in which he discusses, in a masterly manner, the policy announced by the Cabinet in their proposed dealings with the question of Reform. Out of their own speeches he deduces the sentence of their condemnation.—Press.

Not only has Mr. Murchison established by his timely publication of this admirable pamphlet his title to the lasting gratitude of the Conservative party, but he has also displayed qualities as a thinker and a writer, which place him in the front rank of the political writers of the present day. He analyses with the most consummate skill the Liberal pretensions to be sole champions of liberty and reform. He exposes in a calm and argumentative manner the miserable cant, fallacies, and pretensions which form the main elements of the Liberal creed, and shows, most conclusively, that it is opposed to the best interests of the nation. It is a pamphlet that deserves the most thoughtful study from men of all shades of political belief. Though written in the interests of a party, we defy our opponents to point out a single perversion of history or illogical deduction.—Hillog Chronicle.

It is one of the ablest vindications of the sound and consistent course of Conservative policy; and, at the same time, the most complete exposure of Liberal chicanery that has appeared.—Brighton Gazette.

Mr. Murchison has done good service by exposing the inconsistency and duplicity of the two chief members of the Ministry.—Exeter Gazette.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Devon.IN the MATTER of the COMPANIES ACT, 1862, and of the ROBOROUGH DOWN TIN AND COPPER MINING COMPANY (LIMITED).—Notice is hereby given, that ALL CREDITORS of the ABOVE-NAMED COMPANY are REQUIRED, on or before the 26th day of May next, to SEND IN their NAMES and ADDRESSES, and the AMOUNTS and PARTICULARS of THEIR SEVERAL CLAIMS on the said company, to William Michell, Esq., the Registrar of the said Court, at Truro.  
Dated Registrar's Office, Truro, May 11, 1866.In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL PRUDENCE COPPER MINING COMPANY (LIMITED).—The Registrar of this Court has appointed the 1st day of June next, at Eleven o'clock in the forenoon, at the Registrar's Office, at Truro, to SETTLE the LIST of CONTRIBUTORIES of the above-named company, now made out and deposited at the said Office.  
WILLIAM MICHELL, Registrar of the said Court.  
Dated this 14th day of May, 1866.In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.IN the MATTER of the COMPANIES ACT, 1862, and of the CARN VIVIAN MINING COMPANY.—By the direction of His Honour the Vice-Warden, notice is hereby given that, on Wednesday, the 30th day of May instant, at the Registrar's Office, at Truro, in the county of Cornwall, at Eleven o'clock in the forenoon, this Court will PROCEED to MAKE a CALL of TEN SHILLINGS PER SHARE on all the contributories settled on the list of contributories of the said company under Class A.  
All persons interested therein are entitled to attend at the time and place to offer objections to such call.  
WILLIAM MICHELL, Registrar.  
Dated the 16th day of May, 1866.In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.IN the MATTER of the COMPANIES ACT, 1862, and of the SITHNEY AND CARNMEAL MINING COMPANY.—By order made by His Honour the Vice-Warden of the Stannaries, in the above matter, dated the 16th day of May instant, on the petition of William Chappell, of Wheal Vor Cottage, in the parish of Breage, within the said Stannaries, a contributory of the said company, it was ORDERED that the said SITHNEY AND CARNMEAL MINING COMPANY should be WOUND-UP by this Court, under the provisions of the Companies Act, 1862.  
HODGE, HOCKIN, and MARRACK, Truro  
(Solicitors for the Petitioner).  
Dated Truro, May 16, 1866.In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL HEARLE MINING COMPANY.—The Registrar of this Court has appointed Tuesday, the 5th day of June next, at Eleven o'clock in the forenoon, at the Registrar's Office, at Truro, to SETTLE the LIST of CONTRIBUTORIES of the ABOVE-NAMED COMPANY, now made out and deposited at the said Office.  
WILLIAM MICHELL, Registrar of the said Court.  
Dated this 17th day of May, 1866.In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the ROSKEAR MINING COMPANY.—Notice is hereby given, that a PETITION for the WIND-UP of the ABOVE-NAMED COMPANY by the Court was, on the 17th day of May inst., presented to the Vice-Warden of the Stannaries, by William John Rawlings, a creditor and also a contributory of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the sittings of the Court to be held at Truro, in the county of Cornwall, on Monday, the 28th day of May inst., at Eleven o'clock in the forenoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden of the Stannaries, at Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioner, his solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 24th day of May inst., and notice thereof must at the same time be given to the petitioner, his solicitors, or their agents.  
HODGE, HOCKIN, and MARRACK, Truro, Cornwall  
(Solicitors for the Petitioner).GREGORY, ROWCLIFFE, and ROWCLIFFE, 1, Bedford-row, London  
(Agents of the said Solicitors).  
Dated Truro, May 17, 1866.

## In Chancery.

PURSUANT to a Decree of the High Court of Chancery, made in a Cause "Kennedy and Others against Kennedy," the CREDITORS of Charles Burton Kennedy, late of Ulverston, in the county of Lancaster, iron ore merchant (who died in or about the month of September, 1865), are, on or before the 14th day of June, to SEND by post prepaid to Messrs. Weir and Robins, of 3, Guildhall-chambers, 22, Basinghall-street, in the City of London, the solicitors of the defendant, Elizabeth Kennedy, the administratrix of the deceased, their Christian and surnames, addresses and descriptions, the full particulars of their claims, a statement of their accounts, and the nature of the securities (if any) held by them, or, in default thereof, they will be peremptorily excluded from the benefit of the said Decree. Every creditor holding any securities is to produce the same before the Master of the Rolls, at his chambers, situated in the Rolls-yard, Chancery Lane, Middlesex, on Friday, the 6th day of July, at One o'clock in the afternoon, being the time appointed for adjudicating on the claims.  
JOHN WILLIAM HAWKINS, Chief Clerk.  
WEIR and ROBINS, 3, Guildhall-chambers, 22, Basinghall-street  
(Solicitors for plaintiffs).  
Dated this 10th day May, 1866.

## In Chancery.

FREEHOLD ESTATE, GLAMORGANSHIRE, comprising upwards of 82 acres, with VALUABLE VEINS of COAL thereunder.

TO BE SOLD, BY TENDER, in One Lot, pursuant to a Decree of the High Court of Chancery made in a Cause Thomas, Dickie, with the assent of the Vice-Chancellor Sir Richard Torin Kinderley, before John Arthur Buckley, Esq., the chief clerk of the said Judge, at the chambers of the said Judge, No. 3, Stone-buildings, Lincoln's Inn, in the county of Middlesex, on Thursday, the 28th day of June, 1866, at Twelve o'clock at noon.

A FREEHOLD ESTATE, called or known by the name of PENYBONT NEWYDD, containing 32 acres or thereabouts of good ARABLE and PASTURE LAND, situated in the parish of LIANDILOTLAYBONT, in the county of GLAMORGAN, including upwards of 14 acres of thriving young oak and other timber, now in the occupation of John Thomas, or his under tenants, and the yearly surface rent of £50.  
There are rights of common over an extensive common called Rhyf Fawr, adjoining the estate on the south. Upon the estate there are a substantial DWELLING-HOUSE and suitable FARM BUILDINGS, and underneath are VALUABLE VEINS of COAL. And there is also an excellent STONE QUARRY of BLOCK and FLAG STONE opened, and within about 150 yards of the Llanelli and Llandilo Railway, to which there is easy access.

The property is very favourably situated, the railway passing through it, and only one mile and a half from Fawcett Railway station, within twelve miles of the thriving port of Llanelli, thirteen miles from Swansea, and within easy distance of various considerable lines of the Loughor River, in which there is excellent fishing, skiffs a considerable portion of the land.

Particulars, with copies of the conditions of sale and form of tender, may be had of Mr. STAFFORD BAXTER SOMERVILLE, of 48, Lincoln's Inn-fields, Middlesex; and of Mr. LEWIS MORRIS and Mr. GEORGE THOMAS, of Carmarthen, solicitors; and of Mr. JOHN HOWELL THOMAS, Auctioneer, Carmarthen.

In the Landed Estates Court, Ireland, Queen's County.

In the Estate of HENRY HOWDEN, deceased.

Owner and petitioner, Continued in the name of Caroline Howden.

TO BE SOLD, in One Lot, before the Hon. Judge Dubbs, at his Court, Landed Estates Court, Inns Quay, in the City of Dublin, on Thursday, the 7th day of June, 1866, at the hour of Twelve o'clock at noon, the MINES of COAL and CULM, held in fee simple, situate in and under 82A, 32A, 33A, Irish acres, of the lands of Ballyheane, called Modubagh or Bambrick's Mountain, in the barony of Ballyadams, and Queen's County.—Dated this 24th day of May, 1866. GEORGE T. HOPKINS, Chief Clerk.

The Modubagh Colliery is situated in the Townland of Ballyheane Upper, in the Barony of Ballyadams and Queen's County. The portion to be sold contains 82A, 32A, 33A, Irish plantation measure, and this part has been already wrought to the extent of 12A, 2A, 32A, leaving 72A, 1A, 3A, unworked. The estate originally contained 183 Irish acres, and the colliery was profitably worked for a long period. The colliery has been recently partitioned by the Landed Estates Court.

The colliery lies adjacent to the well-known Wolf Hill Colliery, which is in full operation, and yields a good supply of free-burning anthracite.

The Modubagh Colliery is of easy access, there being excellent county roads passing directly through it leading to Naas, Carlow, Castlecomer, Abbeyleix, Ballinakil, Maryborough, &amp;c., and it is but nine miles from the Athy Station on the Great Southern and Western Railway.

A report on the mine, recently made by order of the Court, by Joseph O'Kelly, Esq., M.A., C.E., geologist (Geological Survey of Ireland), is lodged in Court, and can be inspected by intending purchasers.

Patrick Brennan, of Wolf Hill, will point out the site and boundaries of the colliery. For rentals and further particulars apply at the Landed Estates Court, Inns Quay, in the City of Dublin; or to EDWARD GREEN FOLEY and ROBERT POMCUL, solicitors, having carriage of the order for sale, No. 52, Lower Sackville-street, Dublin.

## TO COLLIERY PROPRIETORS, AND OTHERS.

TO BE DISPOSED OF, the LEASE, PLANT, ENGINE, BOILERS, MACHINE, and all other effects used in a colliery. Any person or persons desirous of entering into the above business will find this an excellent opportunity for investment. It contains 94 acres, or thereabouts, and has three good workable coal seams of first-rate quality; one is 6 ft. thick, another 9 ft. thick, and another 6 ft. thick, and is now in good working order, and the lease has 19 years to run.

For further particulars, apply to the MINING JOURNAL OFFICE, 26, Fleet-street, London. None but principals need apply. Satisfactory reasons giving for disposing of the same.

## MINE MATERIALS FOR SALE.

MR. GEORGE SEALY WILL SELL, BY AUCTION, at WHEAL ANNA, ST. HILARY, near MARAZON, CORNWALL, on Wednesday, the 28th May, 1866, at Twelve o'clock, the following MINE MATERIALS:—STAMP-ENGINE.—A 70 in. cylinder PUMPING ENGINE, 10 ft. stroke in cylinder, and 12 ft. in shaft, with THREE BOILERS, and first piece of rod. A 36 in. cylinder PUMPING ENGINE, 6 ft. stroke, with ONE BOILER, and first piece of rod. A 32 in. cylinder double-acting STAMPING ENGINE, with ONE BOILER, winding gear, barrel, and driving wheels, two stamp axes, frames, &amp;c. A 22 in. cylinder WINDING ENGINE, 5 ft. stroke, with horizontal cage, and ONE BOILER. SHEARS.—One 60 ft. shears, with three pulleys, complete. One 51 ft. shears, with two pulleys, complete.

CAPSTANS.—Two 10 arm capstans, oak axles, iron centre pieces, &amp;c. CAPSTAN ROPE.—145 fms. of 18 in. and 16 in. shaft tackle.

BOSS.—Two large balance boss, complete in every respect. Several horse whims and pumps, and four matching pieces; six 9 ft. 12 in. pumps; fifteen 9 ft. 12 in. pumps; one 18 in., two 16 in., two 14 in., one 12 in., and one 8 in. windrope; one 28 in. plunger pole, 11 ft. long, with stuffing box and gland; one 16 in. plunger pole, 13 ft. long, with stuffing box and gland; two 14 in. plunger poles, each 11 ft. in length, with stuffing boxes and glands; one 12 in. plunger pole, 11 ft. in length, with stuffing box and gland; one 12 in. working barrell, each 12 ft. long; one 14 in. ditto; one 18 in. doerpiece and door; one 17 in. ditto; two 16 in. ditto; one 14 in. ditto; one 12 in. ditto; one 18 in. H-piece; one 17 in. ditto; one 16 in. ditto; one 12 in. ditto; one 17 in. pole case; one 19 in. pump and matching piece; one 10 in. matching piece; lift in hot water cistern, three pumps, H-piece, doerpiece, plunger pole and case, stuffing box and gland.

RODS.—14 in., 12 in., 10 in., 9 in., and 7 in. square.

ROD-PLATES (best hammered iron).—8 in., 7 in., 6 in., and 5 in.

MAIN CAFE (ditto), several pairs, 8 in., 7 in., and 6 in.

PULLEYS.—100 flat-rod pulleys, and 22 wheel sheaves, from 4 ft. to 6 ft. diameter.

IRON RODS.—Buck rods, 2 1/2 in. and 1 1/2 in., with clamps and joints.

WROUGHT-IRON WORK (hammered iron).—Loops, straps, eyes, pins, yokes, and bolts; valves, bucket prongs, clamps and joints, stamps lifters, flat-thread screws, ironwork for angle bob, &amp;c.; staples and glands, rod bolts, flange bolts, and rings; flat-thread screw-top staples and glands; flat, square, and angle-iron.

NAIL IRON.—About 17 tons of bridge and T-rails.

SKIPS.—Seven iron skips and two wood skips.

WAGONS.—Eleven wood tram wagons, one iron ditto.

CAST-IRON WORK.—Gudgeons, sockets, stools, bishops' heads, &amp;c.; 20 tons of wrought and cast scrap-iron.

CHAIN.—2 tons horse whim chain, of best quality; 8 tons of 9-16 and 11-16 chain, of best quality; horse and steam whim kibles.

SMITHS' SHOP.—One 42 in. and three 36 in. smiths' bellows, four anvils, mandrills, vice, crane, smiths' and miners' tools, screwing stock and plates.

CARPENTERS' SHOP.—Bench, vice, large wheel, grinding stones, &amp;c.

DRESSING FLOORS, &amp;c.—Brunton's catener, 11 ft. diameter, withovens, dry, hopper, &amp;c.; four large beams, scales, and stands; an excellent theodolite by Wiltson, and a miners' dial.

The engine and materials are all of excellent quality, and situate within four miles of the port of Hayle, six miles of Penzance, and three miles from the St. Ives Road and Marazion Stations of the West Cornwall Railway; they may be viewed on application to Capt. Ford, at the mine, and any further information may be obtained from the Auctioneer, at Marazion; or from Mr. J. P. BENNETTS, Wodehouse-place, Falmouth.

SALE OF MINE MATERIALS AT WHEAL ALBERT, FERRANZABULO, NEAR TRURO

MR. JOHN THOMAS has received instructions to SELL, BY PUBLIC AUCTION, on the 28th of May, at Twelve o'clock at noon, at the above mine, the whole of the MATERIALS, which are almost new, and of first-rate quality, including a new 45 in. cylinder PUMPING ENGINE, 9 ft. stroke, equal beam; a 13 ton BOILER and fittings; 140 fathoms of iron flat-rods; 100 fathoms of new 12 in. capstan rope; 80 fathoms of pumps, from 15 in. to 8 in.; shears, balance bob, whims, chains, kibles, timber beams, scales, and all the other materials of a fully-appointed mine.—Further particulars may be obtained on application to Capt. MIDDLETON, on the mine; to Mr. F. W. DAVE, Redruth; or to the Auctioneer, Mr. JOHN THOMAS, The Glebe, Church Town, Redruth, Valuer and General Agent.  
May 9, 1866. Luncheon on the table at Twelve o'clock precisely.

## CRONEBANE MINES—SALE OF MACHINERY AND MATERIALS.

MR. D. JOHNSON has been instructed to SELL, BY PUBLIC AUCTION, on Wednesday, the 6th day of June, 1866, by Eleven o'clock in the forenoon, at the CRONEBANE MINES, near the Vale of Ovoca, in the county of Wicklow (subject to such conditions as will be read at the auction), the whole of the MACHINERY AND MATERIALS thereon, consisting of—ONE 30 in. cylinder ROTARY CONDENSING STEAM PUMPING ENGINE and 10 ton BOILER, with fly wheel, wrought-iron shaft and whim cage, and vertical and balance-bobs for working flat-rods.

ONE 24 in. cylinder ROTARY STEAM WHIM ENGINE, one 10 ton and one 8 ton BOILER, fly wheel, whim cage, &amp;c.

307 fms. 1 1/2 in. square iron flat-rods

22 fms. 1 1/2 in. round iron ditto

29 fms. 7/8 in. wood flat-rods, with strapping plates, &amp;c.

1000 fms. of whelm chain, 4-1/2 in., 11-16ths, 5-1/2 in., 9-16ths, &amp; 1 1/2 in.

3 oak horse whelm axes

4 shaft tackles, with pulleys, &amp;c.

18 10 in. 9 ft. pumps

2 10 in. 8 ft. ditto

1 10 in. 5 ft. ditto

9 7 in. 6 ft. ditto

1 7 in. 6 ft. ditto

330 fms. 4 in. pumps

10 tram wagons; 3 whelm pipes; 7 steam whelm kibles; 6 horse whim ditto; 2 winns ditto; 18 skp wheels; 65 pulleys for flat-rods; 24 large ditto; 26 chain ditto; 9 sets of pulley stands; sundry rod plates; staples and glands; flange bolts and pump rings; launders; carpenters' bench; smiths' bellows; anvil, vice, and other tools; sundry lots of new and old iron; miners' tools; lot of steel; several lots of timber and a large quantity of plank; two weighing machines, for weighing up to 4 tons; together with sundry other mine materials.

The above machinery and materials are well situated for removal, being only about two miles from the Ovoca Station of the Dublin, Wicklow, and Wexford Railway, which is in communication with the port of Wicklow and the wharves at Kingstown. For viewing the same apply to Capt. GEORGE OATES, on Tigronny Mines, adjoining; and for further information to the Auctioneer, Ballinacraig, Rathdrum; or to Messrs. WILLIAMS and Co., Tregulow, Scourie, Cornwall.

A punctual attendance is solicited. Refreshments on the mines.  
Dated Tregulow Office, May 16, 1866.COUNTY OF GLAMORGAN.  
VALUABLE COLLIERY PROPERTY AND HARBOUR.  
PRELIMINARY ANNOUNCEMENT.

MR. THOMAS THOMAS has been instructed to offer FOR SALE, BY PUBLIC AUCTION, in the ensuing months of May or June, at the Mackworth Arms Hotel, Swansea, unless previously disposed of by private contract (of which due notice will be given), subject to conditions of sale to be then produced, all that valuable COLLIERY and COAL FIELD, situate in the parish of LLANRHIDIAN, in the county of GLAMORGAN, known as the LYNCH COLLIERY, containing the well-known Lynch vein, the Farm vein, and two others.

Also the LYNCH HARBOUR, contiguous to the said colliery, at the confluence of the River Morialla with the River Loughor, together with the land, conveniences, and works connected therewith.

And also that one undivided FOURTH SHARE of a valuable COLLIERY, situate in the parishes of LOUGHOR and LLANRHIDIAN, in the county of GLAMORGAN, known as the BERRINGTON COLLIERY, containing the well-known Hughes's vein, and three others.

Detailed particulars and plans are now in preparation. In the meantime, for further information, and to treat, application may be made to Mr. GARDNER, solicitor, Swansea; Mr. H. RUXHAM, mining engineer, Swansea; or to the Auctioneer, at his offices at Swansea and Neath.—Swansea, April, 1866.

## COPPER MINES TO BE SOLD.—On the 12th June next there will be SOLD, BY PUBLIC AUCTION, at Half-past Eleven A.M., in the Town Hall, at Dillenburg, Duchy of Nassau, Germany,

A.—The DOROTHEA SMELTING HOUSE, used hitherto for the smelting of nickel and copper. It is situated half a mile from the station at Dillenburg, on the Dietzthal, the water of which stream, with a fall of 1



## IMPORTANT REDUCTION IN THE PRICES OF PORTABLE ENGINES FOR 1866.

**CLAYTON, SHUTTLEWORTH, AND CO.,**  
ENGINEERS,  
MANUFACTURERS OF PORTABLE AND FIXED STEAM ENGINES, MA-  
CHINERY FOR PUMPING, HOISTING, GRINDING, SAWING, &c.  
ENGINES FOR STEAM CULTIVATION, SELF MOVING ENGINES FOR COM-  
MON ROADS, AND AGRICULTURAL PURPOSES GENERALLY.  
STAMP END WORKS, LINCOLN, and 78, LOMBARD STREET, LONDON.  
Also at  
LOWENGASSE No. 44, LANDSTRASSE, VIENNA, and GEGENUBER DEM  
BAHNHOF, PESTH.

Descriptive, illustrated, and priced catalogues free per post.  
Special Drawings when required.  
THE BEST STEAM THRASHING MACHINERY MADE.

**PORTABLE ENGINES.—CLAYTON, SHUTTLEWORTH,**  
and Co. beg to announce that they have made a CONSIDERABLE REDUCTION  
in the PRICE of their PORTABLE STEAM-ENGINES.  
Revised catalogues will be sent on application to CLAYTON, SHUTTLEWORTH, and Co.,  
Lincoln; or 78, Lombard-street, London.

**HORIZONTAL ENGINES FOR SALE,** at very low prices:—  
One 12 in. cylinder, 24 in. stroke; one 12 in. cylinder, 36 in. stroke; and two  
14 in. cylinders, 24 in. stroke. All ready for delivery, and may be had with or without  
fly-wheels.—Apply to Messrs. E. PAGE and Co., Laurence Pountney-place Laurence  
Pountney-hill Cannon-street E.C.

Patent Flat and Round Wire and Hemp Ropes, &c.

**JOHN AND EDWIN WRIGHT, PATENTEES,**  
CITY OFFICE, 19, LONDON STREET, E.C.  
ESTABLISHED 1770.

Manufacturers of every description of  
**IMPROVED PATENT FLAT AND ROUND WIRE ROPES,**  
From the very best quality of charcoal iron and steel wire.

**PATENT FLAT AND ROUND HEMP ROPES,**  
SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCT-  
ORS, STEAM-PLUGH ROPES (made from Webster and Horsfall's patent  
steel), WIRE, HEMP, FLAX, ENGINE YARN, COTTON WASTE, &c.  
UNIVERSITY WORKS, MILLWALL, POPLAR, LONDON.

**UNIVERSITY WORKS, GARRISON STREET, BIRMINGHAM.**  
No 2, OSWALD STREET, GLASGOW.  
CITY OFFICE, No. 19, LONDON STREET, LONDON.

**BASTIER'S PATENT CHAIN PUMP,**  
APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY  
APPLICABLE TO ALL KINDS OF MINES, DRAIN-  
AGE, WELLS, MARINE, FIRE, &c.

J. U. BASTIER begs to call the attention of proprietors of  
mines, engineers, architects, farmers, and the public in ge-  
neral to his new pump, the cheapest and most efficient ever  
introduced to public notice. The principle of this new pump  
is simple and effective, and its action is so arranged that ac-  
cidental breakage is impossible. It occupies less space than  
any other kind of pump in use, does not interfere with the  
working of the shafts, and unites lightness with a degree of  
durability almost imperishable. By means of this hydraulic  
machine water can be raised economically from wells or any  
depth; it can be worked either by steam-engine or any other  
motive power, by quick or slow motion. The following  
statements will give some of the results obtained by this hy-  
draulic machine as daily demonstrated by use:—

- 1.—It utilizes from 90 to 92 per cent. of the motive power
- 2.—Its price and expense of installation is 75 per cent. less  
than the usual pumps employed for mining purposes.
- 3.—It occupies a very small space.
- 4.—It raises water from any depth with the same facility  
and economy.
- 5.—It raises with the water, and without the slightest in-  
jury to the apparatus, sand, mud, wood, stone, and every ob-  
ject of a smaller diameter than its tube.
- 6.—It is easily removed, and requires no cleaning or at-  
tention.

BASTIER'S PATENT CHAIN-PUMP may be seen daily  
in operation at Messrs. SAMUEL BERGER and Co.'s Patent  
Rice Starch Works, Bromley-by-Bow, London, E. Cards of  
admission to be had on application to the inventor and pa-  
tenteer, Mr. J. U. BASTIER, C.E.; or to Messrs. J. JACKSON  
and Co., Engineers, 17, Gracechurch-street, London.

J. U. BASTIER and Messrs. JACKSON and Co. will CON-  
TRACT TO ERECT THE PATENT PUMP, and will GUAR-  
antee it for ONE YEAR, or will grant licenses to manufacturers, mining  
proprietors, and others, for the use of this invention.  
OFFICES, 17, GRACECHURCH STREET, LONDON.

**SALOM'S NEW OPERA and FIELD GLASS,** and the  
"RECONNOITERER" GLASS, price 10s. 10d., sent free.—This TOURIST'S FA-  
vorite, through extraordinary division of labour, distinctly shows small windows 10  
miles off, landscapes at 30 miles, Jupiter's moon, &c.—The MARQUIS OF CARMARTHEN:  
"The reconnoiterer is very good."—The EARL OF BREADALBANE: "I find it all you say,  
and wonderfully powerful for so very small a glass."—EARL OF CAITHNESS: "It is a beau-  
tiful glass."—REV. LORD SCARSDALE: "Approves of it."—LORD GIFFORD, of Ampney:  
"Most useful."—LORD GARVAGH: "Remarkably good."—SIR DIGBY CATELY, of Bromp-  
ton: "It gives me complete satisfaction, and is wonderfully good."—SIR W. H. FIELDEN:  
"I do not think it can be surpassed; it gives great satisfaction."—CAPT. SENDET, Royal  
Small Arms Factory, Enfield, "found it effective at 1000 yards range."—F. H. FAWKES,  
of Farley Hall, Esq.: "I never before, although I have tried many, met a glass com-  
bining so much power for its size with so much clearness."—The Field: "We have  
carefully tried it at 800-yards range, and find it fully equal to any of those pre-  
sented, although they had cost more than four times its price."—Notes and Queries:  
"What intending tourist will now start without such an indispensable companion?"  
The celebrated HYTHE GLASS shows bullet-marks at 1200 yards, and men at 3½  
miles; price, 31s. 6d. All the above, respectively bearing the registered trade marks,  
"Salom," "Reconnoiterer," and "Hythe," are only to be had direct from SALOM and  
Co., 98, Princess-street, Edinburgh, and 137, Regent-street, London, W.  
A few hours will carry a glass to almost the remotest town in the United Kingdom.  
No agents of any kind anywhere.

**THE METEOROLOGICAL ALMANAC, AND MONTHLY  
WEATHER EPHEMERIS,** by GEORGE SHEPHERD, C.E.—The accuracy  
of the Weather Predictions by Mr. GEORGE SHEPHERD, C.E., as published in the MINING  
JOURNAL for several years, forecasting gales, winds, rain, unsettled and fine weather,  
for each month in the year, is now generally acknowledged. At the special request of  
numerous eminent agriculturalists, merchants, shipowners, and others, he has pub-  
lished THE METEOROLOGICAL ALMANAC, AND MONTHLY WEATHER  
EPHEMERIS, in a very convenient form for the pocket, for reference. In this work will  
be given the dates for the changes in the weather for each month, viz.:—When wind,  
rain, fine, and unsettled weather will occur in England; and also the state of the wea-  
ther for each next succeeding month throughout the year.

TERMS TO SUBSCRIBERS, POST FREE:—  
Yearly ..... £0 6 0  
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Post Office orders to be made payable to Mr. GEORGE SHEPHERD, C.E., No. 26, Throg-  
morton-street, London, E.C.

**IRON TRADE CIRCULAR (RYLANDS')—**  
NOTICE.—MR. GEORGE RYLAND, "IRON TRADE CIRCULAR" OFFICE,  
UNION CHAMBERS, UNION PASSAGE, BIRMINGHAM.

To our ESTEEMED CORRESPONDENTS.—For the convenience of the proprietors of the  
"Iron Trade Circular," our subscribers and patrons are respectfully requested to give  
all orders and make all remittances direct to Mr. George Ryland, the financial partner  
of the "Iron Trade Circular," at the above address, and not as heretofore to Messrs.  
Charles Ryland and Sons, the proprietors being desirous of keeping their business apart  
from other, as the circulation and accumulating business of the "Iron Trade Cir-  
cular," as an advertising medium, renders this course absolutely necessary. We trust  
this slight alteration will not occasion any inconvenience to our friends.

**THE COUNTY PAPER.**—County advertisements inserted by Authority of the  
Court of Quarter Sessions.

**THE FLINT COUNTY CHRONICLE:** A Mining, Agricultural,  
and General Advertiser for Flint, Rhyl, Holywell, Northop, Buckley,  
Hawarden, Saltney, and neighbourhood. The great success which has attended the pub-  
lication of the "County Chronicle" justifies the proprietors in drawing the attention of  
advertisers to the special advantages it offers as an advertising medium. For the an-  
nouncements of auctioneers, public companies, and tradesmen, it is the best in the  
county, having attained a circulation throughout Flintshire treble that of all the other  
so-called local papers combined. As a newspaper it contains full and impartial reports  
of all local events, and devotes particular attention to the mining and oil trade interests  
of the district—special articles appearing from week to week. Agriculture is not ne-  
glected, the latest market reports being a distinctive feature of the paper, together with  
other matters of interest to the agriculturist. All communications should be addressed  
"To the Editor," Bromfield Villa, Maesdydderwen, Mold.

**NEW MEDICAL GUIDE.**  
**DR. SMITH,** who has had twenty years' practical experience in the  
treatment of Debility, Spermatorrhoea, Disorders of the Nervous System, &c.,  
has published A GUIDE (138 pages) for Self-Cure. Sent to any address on receipt of  
two stamps. Dr. SMITH may be consulted personally (or by letter) in all private and  
confidential cases.—Address, SMITH and Co., Barton-crescent, Euston-road, London  
W.C. Consultations daily from Eleven to Five.

**DR. WATSON (of the Lock Hospital), F.R.S.,** Member of the  
College of Physicians and Surgeons, on the SELF-CURE OF NERVOUS  
AND PHYSICAL DEBILITY, Loss of Appetite, Timidity, Impotency for  
Fecundation, &c., with means for perfect restoration. Sent free for two stamps by Dr.  
Watson, No. 1, South-crescent, Bedford-square, London. Consultations daily from  
Eleven till Three, and Six till Eight.

Just published, post-free for two stamps,  
**WONDERFUL MEDICAL DISCOVERY,** demonstrating the  
true causes of Nervous, Mental, and Physical Debility, Loss of Spirit, In-  
digestion, Want of Energy, Premature Decline, with plain directions for perfect restora-  
tion to health and vigour, WITHOUT MEDICINE. Sent free on receipt of two stamps,  
by W. HILL, Esq., M.A., Berkeley House, South-crescent, Russell-square, London, W.C.

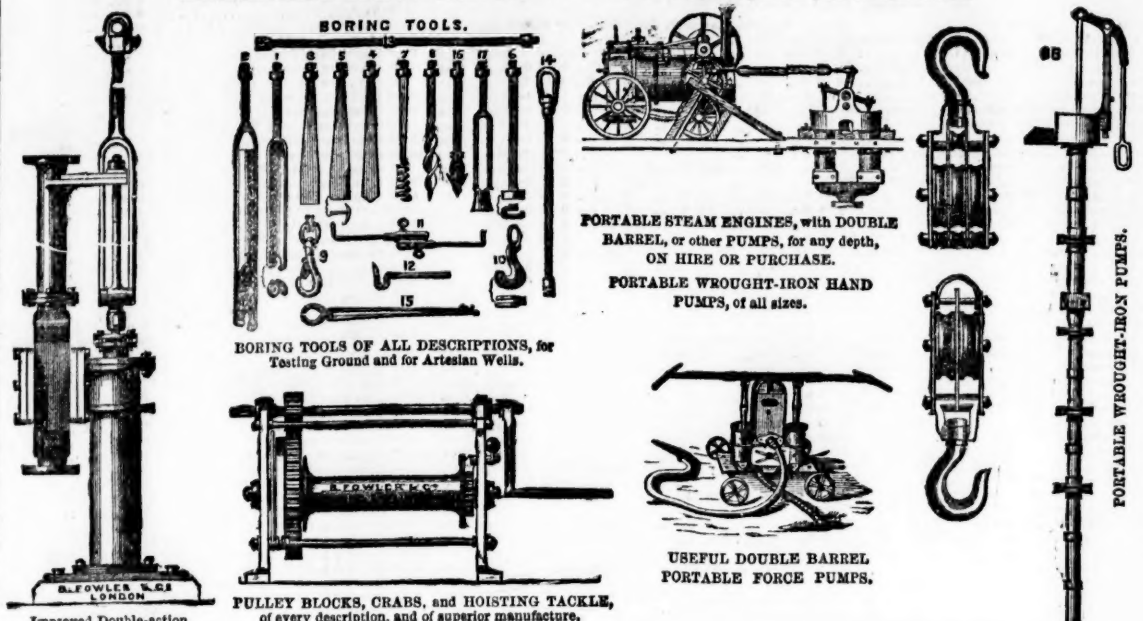
**PAINS IN THE BACK, KIDNEYS, &c.,** resulting from debility  
and exhaustion of the system, and disordered kidneys, produced by impurity of  
the blood, have been relieved and cured by the use of **PAR'S LIFE PILLS.** May be  
had of any chemist.

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of brass and iron. HAMMERED IRON and HEAVY SHAFTS OF ANY SIZE.  
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**PATENT FLEXIBLE TUBING,**  
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Machinery sent to all parts of the world.  
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capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping  
purposes. Wagons in working order maintained by contract.  
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\*Loans received on Debenture: particulars on application.  
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**GUN COTTON FOR BLASTING.**  
The extended use of this material has enabled the manufacturers to issue a new  
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tention of those interested in MINING and BLASTING OPERATIONS to the GREAT  
SAVING IN TIME and COST which may be effected by the introduction of gun-cotton.  
Directions for use and full particulars obtained upon application to  
THOMAS PRENTICE and CO.,  
173, FENCHURCH STREET, LONDON; or  
GUN COTTON WORKS, STOWMARKET.

**COAL CUTTING MACHINERY.**  
The WEST ARDSLEY COMPANY having, by recently patented improvements,  
perfected their coal cutting machinery, worked by compressed air, are NOW READY  
TO MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES.

The results of twelve months' experience in the working of these machines, by the  
West Ardsley Company, have proved most satisfactory, their use being found to  
CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN  
the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.  
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Britannia-street, Leeds.  
**NOTICE.**—The WEST ARDSLEY COMPANY, having reason  
to believe that their patents are being infringed upon, hereby give notice that  
they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may  
MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any  
such INFRINGEMENT is MADE.

First Class Silver Medal, Royal Polytechnic Society,  
Falmouth, 1864.

**CREASE'S PNEUMATIC TUNNELLING ENGINE,**  
for SUPERSEDING the SLOW and EXPENSIVE USE of MANUAL LABOUR  
in SINKING SHAFTS, DRIVING LEVELS, TUNNELLING, &c., is guaranteed to  
drive through any rock of average hardness at a minimum rate of 1 fm. per diem, and  
to sink shafts at the rate of 2 fms. in three days.

Mr. CREASE will undertake contracts for sinking shafts, driving levels, &c., at an en-  
ormous reduction of time and great saving in cost.  
Applications to be addressed (for the present) to the patentee, Mr. E. S. CREASE  
Tavistock Devon.

International Exhibition, 1862—Prize Medal.

**JAMES RUSSELL AND SONS**  
(the original patentees and first makers of wrought-iron  
tubes), of the CROWN PATENT TUBE WORKS, WED-  
NESBURY, STAFFORDSHIRE, have been AWARDED  
PRIZE MEDAL for the "good work" displayed in their  
wrought-iron tubes and fittings.  
Warehouse, 81, Upper Ground-street, London, S.

**BICKFORD'S PATENT SAFETY-FUSE** OBTAINED the  
PRIZE MEDALS at the ROYAL EXHIBITION of 1851, at the INTERNA-  
TIONAL EXHIBITION of 1862, in London, and at the IMPERIAL EXPOSITION  
held in Paris, in 1855.

**BICKFORD, SMITH, AND CO.**  
TUCKINGMILL, CORNWALL, MANUFACTURERS  
OF PATENT SAFETY-FUSE, having been informed that the  
name of their firm has been attached to fuse not of their ma-  
nufacture, beg to call the attention of the trade and public  
to the following announcement:—  
EVERY COIL OF FUSE MANUFACTURED by them has  
TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOW-  
DER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE  
THREADS as THEIR TRADE MARK.

**THOMAS TURTON AND SONS**  
MANUFACTURERS OF  
CAST STEEL FOR PUNCHES, TAPS, and DIES,  
TURNING TOOLS, CHISELS, &c.  
CAST STEEL PISTON RODS, CRANK PINS, CON-  
NECTING RODS, STRAIGHT and CRANK AXLES,  
SHAFTS and  
FORGINGS OF EVERY DESCRIPTION.

DOUBLE SHEAR STEEL, FILES MARKED  
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SPRING STEEL, EDGE TOOLS MARKED  
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Locomotive Engine, Railway Carriage and Wagon  
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FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND  
MINERALS OF EVERY KIND.



It is rapidly making its way to all parts of the globe, being now in profitable use in  
California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the  
United States and England.

The above section illustrates Blake's Stone Breaker, just as made the last five years  
and is fully protected in every part by patents.

Extract from Specification:—A short but powerful vibration is imparted to one or  
both of the jaws by any convenient arrangement, and combination of powerful levers  
worked by a crank or eccentric on the main shaft.

LEGAL PROCEEDINGS will be taken at once against any person or persons found  
making, using, or vending any machine, the construction of which will constitute an in-  
fringement on the above patent. Read extracts of testimonials:—

Aikals Works, near Wednesbury.—I at first thought the outlay too much for so simple  
an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably  
crushing the hardest stones and quartz. WM. DANIEL.

Our 16 by 7 in. machine has broken 4 tons of hard winstone in 20 minutes, for fine  
road metal, free from dust.

Stone and Lime Merchants, Darlington.  
Messrs. OUD and MADDISON.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of  
limestone or ore per day (10 hours), at a saving of 4d. per ton. JOHN LANCASTER.

Oreco, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons  
of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Fremont's Mines, California.—The 16 by 7 in. machine effects a saving of  
the labour of about 30 men, or \$75 per day. The high estimation in which we hold  
your invention is shown by the fact that Mr. Park has just ordered a third machine for  
this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—  
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MEADOW LANE, LEEDS.  
Only maker in the United Kingdom.

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MIDDLESBOROUGH NEWS (published at Hartlepool) is eminently the organ  
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District of South Durham and Cleveland, with which it has been closely identified since  
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tisements to be forwarded to the publisher, Mr. JOHN H. BELL, Southgate, Hartlepool.

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Published every Saturday, price 2d., or quarterly 2s. 2d.

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Published every morning, price 1d.

O'Neils, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields,  
195, High-street, Sunderland.



## PROGRESSIVE MINES.

Shares.	Mines.
6144 North Rosewayne	

Share.	Mines.	Paid.	Last Pr.	Buss. done.	Last pr.
5144	North Rosewarne (copper) ..	1 0 0	..	..	Jan. 1891
2000	No. Shepherd (lead), Newlyn	5 10 0	..	..	Mar. 1891
6000	N. Wh. Bassett (cop., tin) [S.E.]	5 0 0	..	..	April, 1891
5610	North Wh. Crofty (cop.) [S.E.]	3 2 10	..	% ½	Mar. 1891
5000	N. Wh. Crofty (tin), Wager	1 0 0	..	..	..
6144	N. Wh. Robert, Stamp, ..	..	..	..	..
12288	Okef Tor (cop.), Calstock ..	3 2 10	..	..	Feb. 1891
9000	Old Gunnislake (cop.) Calstock	1 5 0	1½	1½	Oct. 1891
6400	Par Conals (copper) [S.E.]	1 17 0	..	..	Jan. 1891
6000	Par & St. Blazey Cons. (tin, cop.)	16 10 0	..	..	Mar. 1891
8465	Pedin-and-drea (tin), Redruth	5 4 6	..	..	May, 1891
1200	Penrice Cons. (cop.), St. Just	5 7 0	..	..	May, 1891
9000	Penhalow Moor (tin), St. Agnes	2 18 0	..	..	April, 1891
6000	Penhalls (tin), St. Agnes	9 10 0	..	..	Aug. 1891
512	Penhalow Moor (silver-lead)	3 7 0	..	..	Sept. 1891
6000	Penrhit (sil. id.), Merion, [L.]	23 10 0	..	..	Feb. 1891
200	Penre Lygan (lead) [L. £30.]	2 0 0	..	..	June 1891
10000	Prince Arthur Cons. (lead), [L.]	9 0 0	..	..	May, 1891
12000	Prince of Wales (tin), Calstock	2 0 0	..	..	Feb. 1891
6000	Princetown (tin), Calstock	1 0 0	..	..	Feb. 1891
13000	Redmoor (cop., tin), Callington	2 0 0	..	..	Feb. 1891
6000	Roaring Water [L. £3] .....	2 0 0	..	..	Oct. 1891
6000	Reinnie Laxey (lead), [L. £6.]	4 0 0	..	..	Feb. 1891
9000	Rhafn (lead), Carnarv. [L. £1]	0 11 0	..	..	..
6000	Restrigion (iron), St. Wenn ..	5 0 0	..	..	..
3000	Rossciff and Tolcarne [L. £10.]	5 0 0	..	..	..
3974	Rosewarne Cons. (copper) ..	5 6 0	..	..	..
6000	Rosewall Hill and Ramoth	3 5 0	..	..	Feb. 1891
3848	Rosewarne United (cop., tin) ..	3 16 11	..	..	..
6000	Roskear (copper), Camborne ..	0 10 0	..	..	Jan. 1891
588	Roskearnworth (cop.), Camborne	2 15 0	..	..	Sept. 1891
6000	Sagelias, Montgomery [L. £8]	6 0 0	..	..	Mar. 1891
0000	Saifell (lead), Isle of Man [L. £1]	..	..	..	Feb. 1891
1206	Sithney Wheal Metal (tin) ..	4 2 6	..	..	..
2000	Stridger United (copper) [S.E.]	2 6 0	..	..	Dec. 1891
6000	S. Alfred Cons. (cop.), Paillick	1 0 0	..	..	June 1891
512	South Bassett (cop.), Gwennap	22 0 8	..	..	Feb. 1891
100	South Bryn Gwlog (lead) ..	7 0 0	..	..	July, 1891
6000	So. Buller (copper), Gwennap	0 14 0	..	..	Oct. 1891
1024	South Callington (silver-lead) ..	5 7 6	..	..	Dec. 1891
6000	S. Caradon Wh. Hooper (cop.)	4 19 0	..	..	Jan. 1891
4138	South Carn Bre. (copper) ..	3 16 0	..	..	May 1891
5000	South Condour (tin) [S.E.]	3 11 0	1½	1½	Jan. 1891
3253	So. Crenver (cop.), Crownan	12 9 0	..	..	May, 1891
9000	S. Dolcoath & Carnarthen Cons.	2 14 6	..	..	Oct. 1891
5000	So. Exmouth (id.), Christow	2 17 0	..	..	April, 1891
9000	S. Foxdale (id. id.) [L. £5]	3 10 0	..	..	Feb. 1891
024	S. Herodsford (lead) Liskeard	9 13 6	..	..	Nov. 1891
56	South Kilmory (lead) ..	23 10 0	..	..	Feb. 1891
0000	South Lovell (tin), Wager	..	..	..	..
0000	S. Miners (lead) [L. £5] ..	5 0 0	..	..	Mar. 1891
56	South Pant-y-Gof (lead) ..	37 0 0	..	..	Dec. 1891
325	So. Phoenix (cop.) Linkin ..	7 1 4	..	..	Oct. 1891
210	South of Scotland [L. £1]	0 15 0	..	..	May, 1891

937 So. Wh. Crofty (cop.), Illogan	24	10	10.	14	..	13	15	Feb. 1906
1000 S. Wh. Grenville (tin & copper).	—	..	—	..	..	..	..	Feb. 1906

794	Spearne Cons. (tin), St. Just.	6	12	0	..	..
280	Spearne Moor (tin), St. Just.	4	17	2	..	..

280	S. P. Trevelan (c. tin)	5 0 0	"	"	"	Mar. 1960
280	Sparrine Cons. (tin) St. Just.	6 12 0	"	"	"	"
280	Spearie Moor (lin), St. Just.	4 17 0	"	"	"	"
000	St. Cuthbert Lead Smelt, [L.]	5 0 0	"	"	"	Dec. 1960
000	St. Ives Wheal Allen (tin).	17 12 0	"	"	"	Fully paid.
000	St. Just Untd. (tin) [L. 2%]	1 0 0	"	"	"	Jan. 1960
000	St. Just Consols (tin) [6000 £1 pd., 8000 s. pd.]	2 10 0	"	"	"	Oct. 1960
000	Stiperstones (d.), Salop [L. £10]	3 10 0	"	"	"	Apr. 1960
920	Star Park (cop.) [S.E.]	38 18 0	"	2 3	"	Oct. 1960
000	Swincome Vale (tin) [L. £1-]	12 12 0	"	"	"	May, 1960
000	T. Hill (tin), St. Austell	1 8 0	"	"	"	Jan. 1960
000	Tolarnes (cop.) Camborne	2 14 0	"	"	"	Nov. 1960
000	Tolvadan (copper), Marazion	1 10 0	"	"	"	Nov. 1960
000	Trerogan (lead), near Holywell	10 0 0	"	"	"	Nov. 1960
007	Trencorn (tin), Uny Leliant	13 16 8	"	"	"	April, 1961
001	Treavanan and Treturrap	15 19 0	"	"	"	Nov. 1960
005	Tresavan and Seadick Cons.	1 12 6	"	"	"	July, 1960
140	Trevanen and Tremsehure	7 11 0	"	"	"	June, 1960
003	Trewatha (sil.-ld.), Menkes	6 17 0	"	"	"	Jan. 1960
046	Trowell's (tin) [L. £1]	9 2 0	"	"	"	Jan. 1960
000	Twyndrych (cop.) [L. £1]	0 4 0	"	"	"	Sept. 1960
000	Tyne Head (tin & cop.) [L. £1]	0 17 0	"	"	"	Mar. 1960
000	Vale of Towry (lead), Carmar.	0 17 6	"	"	"	Sept. 1960
024	Wendron Cons.(tin), Wendron	25 3 10	"	"	"	Aug. 1960
000	Wentnor [L. 2%] (lead)	2 4 6	"	"	"	Oct. 1960
000	Welsh Gold, Dolgelly [L.]	1 0 0	"	"	"	Fully paid.
000	WestBeak (tin) [L.]	1 0 0	"	"	"	Fully paid.
000	West Barton Gill (lead)	80 0 0	"	"	"	"
024	West Burton (cop.) [S.E.]	0 0 0	"	"	"	April, 1960
000	West Cleveford (tin)	1 0 0	"	"	"	Fully paid.
000	West Cwm Erdd (lead) [L.]	5 0 0	"	"	"	Nov. 1960
000	W. Condour Wood (tin, cop.), Cam.	12 6 6	"	"	"	Feb. 1960
000	W. Great Work (tin), Germoe	3 3 0	"	"	"	Feb. 1960
000	W. Maria & Fortescue, Lamerton	3 0 0	"	"	"	Feb. 1960
000	West Nantley (lead) [L.]	10 0 0	"	"	"	Jan. 1960
000	W. Rose Down (cop.) Caradon	16 0 0	"	"	"	April, 1960
000	West Sharp Tor (cop.) Billaton	188 0 0	"	"	"	Mar. 1960
000	West Stratay Park (cop.) Cam.	41 2 0	"	"	"	June, 1960
2	West Tolguish (tin) & Cruth.	49 0 0	40	30 35	"	Mar. 1961
000	West Walsingham (cop.) Illid.	102 8 0	"	"	"	Nov. 1960
000	West Wh. Kitty (tin), St. Agnes	6 10 0	"	"	"	Nov. 1960
000	W. Wh. Martha (cop. Assil.) [L. £2]	1 5 0	"	"	"	July, 1960
000	W. Wh. Prosper (tin), Lanivet.	5 18 0	"	"	"	Oct. 1961

2	Wheat	Buller, Burdett (S.E.)	16	0	0..	16	..	11	13	..Mar. 1906
0	Wheat	Curtis (cop.), Crowan	14	8	4..	—	..			..Jan. 1904

2	Wheel Hurler, (S.E.).....								..	Mar. 1906
3	Wheel Currier (cop.), Crow.....	18	4	0.						Jan. 1906
4	Wheeler (cop.), Traveltick.....	2	0.	0.	12	%	%			Dec. 1906
4	Wh. Damself (cop., tin), Gwennap.....	3	15	0.						July 1906
5	Wh. Edward (cop.), Calstock.....	9	1	6.						Dec. 1906
6	Wheel Emily Heartfelt (cop.).....	18	10	0.						April 1906
7	Wh. Emma (cop.) Buckfastleigh.....	3	19	0.						July 1906
8	Wh. Grenville (copper) [S.E.].....				8	0	0.			Feb. 1906
9	Wh. Gryllia (tin), Ferrar.....	9	11	0.						April 1906
9	Wheel Harry (cop.), Gwinear.....	2	10	1.						May 1906
9	Wheel Ida (sil.-lead), St. Ive.....	0	16	0.	%	%	%			Jan. 1906
9	Wheel Margery (tin, copper).....	2	4	10.						Jan. 1906
9	Wheel Mary Florence (L. & L.).....	1	7	0.						..
9	Wh. Mary Hutchings (Flymp.).....	1	2	6.						Sep. 1865
9	Wh. Morris (tin, cop.), St. Giles.....	6	1	0.						Sep. 1865
9	Wheel Pat (tin, sil.), Blazey.....	8	8	0.						Nov. 1906
9	Wheel Peter (cop.), .....	13	9	2.						Aug. 1906

Wheal Sparrow (copper) . . . .	1	18	0..	—	..	.. May, 1964
Wh. Trannaek (cop.), Sithney	1	12	3..	—	..	.. April, 1964

Wheat Sparron (copper) .....	1 18 0.	—	..	..	May, 1861
Wh. Traunack (cop.) .....	1 12 3.	—	..	..	April, 1861
Wh. Trevenna (tin, cop.) [L. £10]	7 0 0.	—	..	..	Mar., 1861
Wheat Truscott .....	1 10 0.	—	..	..	..
Wheat Union (cop.), Redruth	4 18 5.	—	..	..	Mar., 1861
Wh. Ury (tin, cop.), Redruth	10 4 0.	1	..	¾ %	Mar., 1861
Wheat Vlow (tin) .....	1 7 0.	—	..	..	Feb., 1861

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### MISCELLANEOUS.

0 Anglo-Mexican Mint .....	10 0 0.	16½.	16½.	16½.	..
0 Australian Agricultural .....	20 10 0.	22	..	18 22	..
0 .....	12 10 0.	24	..	23 24	..

## MISCELLANEOUS.

0 Anglo-Mexican Mint.....	10	0 0.	16 1/2.	15 1/2.	16 1/2.
0 Australian Agricultural .....	20	10 0.	22	..	18 22
0 Boickow, Vaughan [L. £100]	17	10 0.	24	..	23 24
0 British American Land.....	44	0 0.	27	..	22 27
5 Canada Company .....	32	10 0.	85	..	75 85
0 Chris. Ste. Ship & Labuan Coal	9	0 0.	3 1/2.	6 1/2	..
0 Civil Offices [L. £50].....	10	0 0.	3 1/2.	2 5	..
0 Company of African Merchants	3	0 0.	3 1/2.	2 1/2	..
0 Credit Fon. & Mob. Engl. [L. £20]	5	0 0.	1 1/2.	2 1/2	2 1/2
0 Discount Corporatn. [L. £100]	20	0 0.	8	..	6 1/2
0 Ebbw Vale Iron Co. [L. £50]	30	0 0.	16	..	15 16
0 Fairbairn Engineering [L. £10]	5	0 0.	6 1/2.	4 1/2	5
0 Fore-street Warehouse [L. £30]	10	0 0.	12 1/2.	11 1/2	12 1/2
0 Gellivara [L. £50].....	30	0 0.	—	—	4 6
0 Gen. Cred. & Fin. Lond. [L. £50]	4	0 0.	2	..	1 1/2
0 General Steam Navigation .....	14	0 0.	28	..	26 28
0 Hudson's Bay .....	20	0 0.	16	..	15 16
0 Humber Ironworks [L. £50].....	30	0 0.	—	—	1
0 Imperial Mercan. Cred. [L. £50]	5	0 0.	10	9 dis.	10 9 dis.
0 Inter. Financial Soc. [L. £20]	5	0 0.	2 1/2.	3 1/2	..
0 Internat. Land Cred. [L. £50]	30	0 0.	—	—	3 1/2
0 Joint-Stock Discount [L. £25]	10	0 0.	—	—	4 6
0 London Dist. Telegraph [L. £5]	5	0 0.	1 1/2.	1 1/2	..
0 London Finan. Assoc. [L. £50]	30	0 0.	12	..	8 12
0 London General Omnibus [L.]	4	0 0.	3 1/2.	3 1/2	3 1/2
0 London & Glas. Engl. [L. £50]	15	0 0.	9	..	9
0 Millwall Ironworks [L. £50].....	5	0 0.	—	—	8 6 dis.
0 Ottoman Company [L. £50].....	2	0 0.	—	—	1 2
0 Overend, Gurney & Co. [L. £50]	15	0 0.	15 1/2.	..	..
0 Royal Mail Steam [L. £100].....	60	0 0.	106	..	108 111
0 Smith, Knight, & Co. [L. £50]	18	0 0.	—	—	1 3
0 Trinidad Petroleum [L. £5].....	5	0 0.	—	—	3

age. Those mines with [L.] appended have been incorporated with

gent have the power, to aid us, by forwarding any alterations or corre-

sions, as well as those officially connected with the mines, we appeal for

option, forwarded to our office, will meet ready attention.

proprietors at their office, No 26, FLEET STREET, E.C. where all cor-

addresses, — May 19, 1866.

\* \* \* Our object being to make the Share List correct, we earnestly call upon all who have the power, to aid us, by forwarding any alterations or correction which may, from time to time, come under their notice. To shareholders, as well as those officially connected with the mines, we appeal for information. Reports from winzes, in fact, mining intelligence of every description, forwarded to our office, will meet ready attention.

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors) at their office, No 26, FLEET STREET, E.C. where all communications are requested to be addressed.—May 19, 1866.